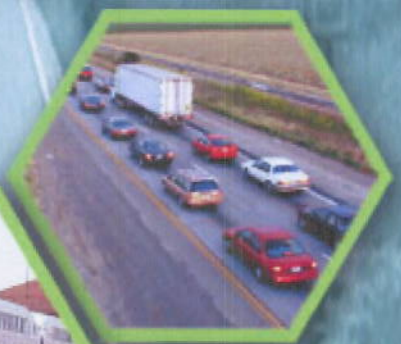
Improving Mobility - Sharing the Future

District 10



District System Management Plan

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

I approve this *District System Management Plan* as the overall Policy Statement and Strategic Plan that will guide decisions and investments for the transportation system within District 10.

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Ken Baxter Date
District 10, Deputy District Director
Planning and Local Assistance
California Department of Transportation

Dennis T. Agar 9/15/10
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Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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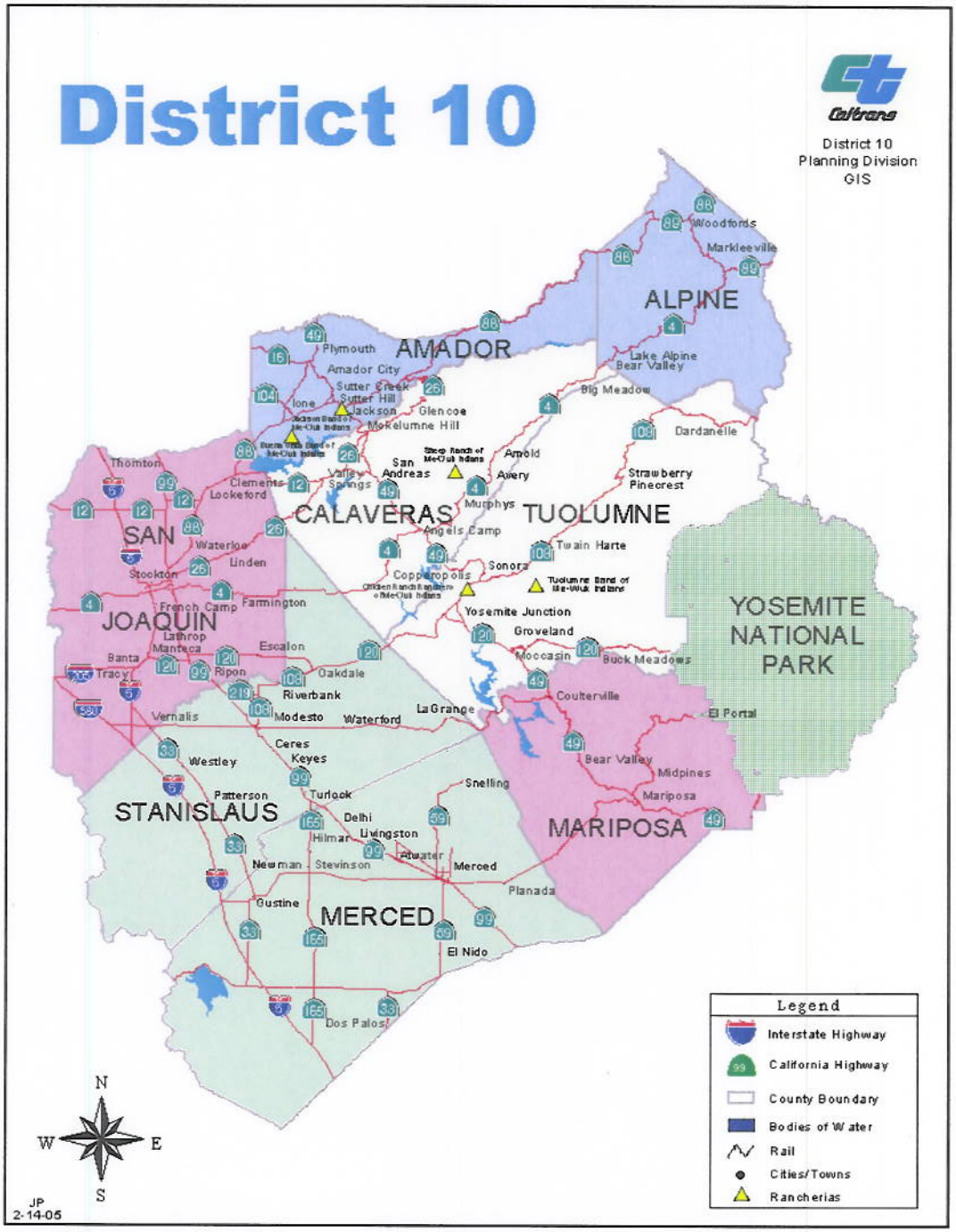
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Sutter Hill
Ione
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McKelumne Hill
Lake Alpine
Bear Valley
Big Meadow
Dardanelle
Strawberry
Pinecrest
Arnold
Avery
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Andreas
Valley
Springs
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Twain Harte
Sonora
Copperopolis
Yosemite Junction
Groveland
Moccasin
Buck Meadows
Thornton
Clements
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EXECUTIVE SUMMARY

The District System Management Plan (DSMP) describes the current transportation system, identifies opportunities, and provides strategies for improving overall transportation and mobility throughout the eight counties of District 10. The DSMP is not an environmental document or funding document, but rather serves as a guide in making planning decisions.

The hallmark of the California Department of Transportation's (Caltrans) leadership includes a commitment to safety, collaboration, inclusion, innovation and communication in the way we work. This commitment is illustrated in the framework for this document, developed through an examination of each local government's Regional Transportation Plan (RTP), and Caltrans' needs for a safe and efficient highway system. The DSMP acknowledges the unique challenges faced by the urban valley and rural mountain county areas, as well as challenges in common.

Data on land use, population, housing and employment, and transportation facility level of service projections are also presented to illustrate the many influences and future impacts current decisions have on the transportation system.

The DSMP identifies major challenges and discusses the relationship between transportation and communities, congestion, growth and land use decisions, and funding.

Section One INTRODUCTION

Caltrans District 10 encompasses a geographically diverse area located in the northern San Joaquin Valley and includes eight counties; three urban counties on the valley floor and five rural counties situated in the foothill and mountain region of the Central Sierra. The counties consist of Alpine, Amador, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus and Tuolumne.

The major urban areas in the District are the cities of Stockton, Modesto and Merced with a combined population of approximately 585,000 and a combined county total of 1.5 million (*State of California, Department of Finance, E-1 Population Estimates for Cities, Counties — January 1, 2009 and 2010. Sacramento, California, May 2010)*. The District borders the San Francisco Bay Area and is experiencing increasing levels of congestion on the highways due to heavy commuter traffic through the Altamont Pass and other routes connecting bedroom communities in the Central Valley to jobs in the Bay Area.

The five mountain counties with a total combined population of approximately 160,000, while not as heavily populated as the urban counties, are experiencing the highest population growth rate, by percentage, in the State. This growth is primarily focused next to existing foothill communities, but they also serve as recreation areas for the urban areas to the west, in the valley and on the coast, with a high transient tourist population living in second homes, hotels, campgrounds or passing through on State Routes. Two of the District's mountain counties border on Yosemite National Park and the District has been very active in interregional issues concerning access to the Park and the development of the Yosemite Area Regional Transportation System (YARTS).

There are 3,484 lane miles in District 10 that include four Sierra passes and is divided into five geographic areas with 24 maintenance stations all under one maintenance region. The District has an annual payroll of $38.9 million for approximately 524 permanent and 100 temporary help employees. The annual operating expense is an additional $35.7 million, for a total annual budget of over $74.6 million.

The District 10 Capital Program consists of approximately 160 active projects worth approximately $4.5 billion. The Capital Program includes State Transportation Improvement Program (STIP) and local projects worth approximately $3.9 billion and State Highway Operations and Protection Program (SHOPP) projects totaling $593 million. The District 10 Local Assistance Office handles approximately 450 projects.

In 2007, District 10 became the first Caltrans facility to activate a Photo Voltaic System allowing for the production of over 250 kilowatts of power by environmentally friendly solar power. This alternative green power will prevent the release of 5 million pounds of carbon emissions over 20 years, equivalent to removing 503 vehicles off the road. Over the same period, the system could generate enough clean, renewable energy to power roughly 563 homes. This solar energy system contributes to a healthier environment for both the employees and surrounding community.

Section Two PURPOSE OF THE DSMP

The DSMP is a strategic and policy planning document that presents the District's view of an efficiently connected and sustainable transportation system for the next 20 years and beyond. Because a State highway is just one part of an interconnected transportation network, the DSMP considers additional transportation systems, such as bus or rail transit service, bicycle and pedestrian facilities, heavy rail, seaports, airports, interregional bus service, and local roadways. All of these systems reduce highway demand by providing travelers and shippers of goods with other options for their needs. Thus, the DSMP not only considers improvements to particular State highways, but more broadly, improvements to all transportation corridors.

District 10 advocates leadership in the way we do business, through partnerships, efficiency and customer service. The DSMP is the State's counterpart to the RTP. The DSMP is intended to inform the general public and our local partners on where resources need to be focused, while recognizing local and regional priorities. Local consultation also extends to encouraging and supporting the participation of Native Americans in the planning and development of future transportation services and facilities. The District is committed to establishing and enhancing government-to-government relations with the tribal governments within the region.

The DSMP strategizes improvements in support of Caltrans' vision to *Improve Mobility across California*. District 10 is committed to the concept of *One Mission/One Vision* and has structured the DSMP to align with Caltrans' principles, goals and action plans.

The DSMP includes the following key sections:

- Overview of the transportation entities within the District.
- Transportation policies, including the *Strategic Growth Plan* and the *California Transportation Plan* (CTP), which provide the basic policy framework to deliver a world-class mobility system that is safe and efficient.
- Caltrans' mission and goals of improving mobility options for the traveling public.
- Caltrans' System Planning processes and documents and their relationship to the DSMP.
- Major challenges and efforts regarding key corridors in the District.
- District 10 transportation system improvement needs.

Section Three DISTRICT TRANSPORTATION PLANNING POLICIES

The DSMP delineates major challenges, priorities and policies to respond to a system that is operating at maximum capacity in some areas and underdeveloped in others; identifies key policies in the areas of safety, level of service, land use and its linkage to transportation, and explains how the public is involved in the development of transportation systems. The DSMP includes *Complete Streets, Context Sensitive Solutions, Smart Mobility Framework* policies and climate change responses.

The DSMP is also shaped by understanding and incorporating broader community values and respect for the environment in transportation planning. District 10 embraces the concept of *Context Sensitive Solutions* in planning and seeks innovative solutions to integrate and balance community, aesthetic, historic and environmental values. What works in one community may not work in another. Finding a balance between interregional and local needs while assuring safety in maintenance and operations is a recognized challenge.

Governor's Strategic Growth Plan

Investments in all areas of infrastructure will help rebuild California into the social and economic powerhouse it was in the past. California's growth over the years has taxed the limits of the existing infrastructure, especially the critically important transportation system, and Governor Schwarzenegger embarked on a plan to make much needed investments to upgrade these valuable resources, necessary to the continued growth and prosperity of California and all its residents.

The number of vehicle miles traveled (VMT) highlights the challenges that are faced. Since the 1960s, travel on the State Highway System has dramatically increased. For example:

Total registered vehicles in California increased from approximately 7.9 million in 1960 to over 34.2 million in 2007. [*Bureau of Transportation Statistics*]

- VMT annually in 1960 was 33 billion. In 2002, it was 321 billion and 328 billion in 2007 [*BTS*], an increase of 7 billion miles traveled in five years.
- Over the ten years from 2005-2016, daily vehicle hours of delay are projected to increase 35 percent from over 558,000 hours to 753,000 hours daily delay. [*Governor's Strategic Growth Plan]*

The DSMP is consistent with the goals and objectives of the *Governor's Strategic Growth Plan*, which among other things commits to minimizing increases in traffic congestion. Key elements of the strategy are illustrated in *Figure 1*.

Figure 1

At the base of the pyramid and the foundation of transportation system management is system monitoring and evaluation. It is essential to understand what is happening on the transportation system so that the best decisions can be made using reliable data. The middle layers of the pyramid are focused on making the best use of existing resources and reducing the demand for new transportation facilities, particularly for peak hour travel. The top layer of the pyramid is system expansion. This layer assumes that all the underlying components are being addressed and that system capacity expansion investments are necessary.

The DSMP is consistent with the **Caltrans Mission** to *Improve Mobility across California.*

The DSMP is also consistent with **Caltrans' Goals**:

- ***SAFETY***: Provide the safest transportation system in the nation for users and workers.
- ***MOBILITY***: Maximize transportation system performance and accessibility.
- ***DELIVERY***: Efficiently deliver quality transportation projects and services.
- ***STEWARDSHIP***: Preserve and enhance California's resources and assets.
- ***SERVICE***: Promote quality service through an excellent workforce.

California Transportation Plan

In addition, the DSMP receives direction from the CTP, the statewide, long-range transportation plan for meeting future mobility needs. The CTP defines goals, policies and strategies to achieve our collective vision for California's future transportation system. The CTP's vision is one of a fully integrated, multimodal, sustainable transportation system that supports the three outcomes, or ***3 Es***, that support quality of life: (1) a prosperous ***Economy,*** (2) a quality ***Environment,*** and (3) Social ***Equity*** developed in collaboration with transportation partners and stakeholders and the traveling public, to ensure that California's future transportation system meets the needs of tomorrow.

Safety

Caltrans' first responsibility with regard to the State Highway System is to ensure the safety of the traveling public. District 10 constantly monitors safety statistics and system-user complaints to determine highway locations that are functioning below acceptable safety standards. Once a safety problem is identified, the resolution of the problem is prioritized to receive funding before capacity increasing or routine maintenance projects. In addition, Caltrans manages programs and policies such as *Safe Routes to Schools, Complete Streets* and *Context Sensitive Solutions* to improve safety for non-automobile modes as well.

Level of Service

Concept Level of Service (LOS) reflects the minimum level or quality of operations that is acceptable for each route segment within the 20-year planning horizon. Local agencies may also use the *Concept LOS* as the California Environmental Quality Act (CEQA) level of significance threshold when evaluating the impacts of local development plans and projects. A significant impact is identified if a specific local development plan, or project, results in a level of service on the highway segment or intersection that is below the Concept LOS. The terms *Concept LOS* and *Concept Facility* have traditionally been used in Caltrans' Transportation Concept Reports (TCRs) to reflect the minimum level of quality of operations acceptable for each route segment within the 20-year planning period and the highway facility needed in the next 20-years to maintain the Concept LOS.

Typical Concept LOS standards in District 10 are LOS "C" in rural areas and LOS "D" in urban areas. Caltrans, as owner and operator of the State Highway System, defines the acceptable level of service by the Concept LOS. Caltrans may consider exceptions to this policy due to extraordinary terrain or transportation conditions.

Land Use and Transportation Linkage

Land use policies and designations are within the power of local agencies, but Caltrans is placing much greater emphasis on better integrating transportation facilities systems with land-use decisions. This involves working closely with cities and counties to ensure development decisions are made with a firm understanding of the impacts of new development on existing transportation facilities.

The integral relationship of land use and transportation decisions requires the close coordination of planning, financing, and project delivery to ensure efficient growth and use of scarce resources. The District works in partnership with its local and regional partners and acts as a full participant in this process to build a consensus with local land use planning agencies regarding the amount of anticipated land use development in a corridor, key issues, and funding mechanisms to support the improvements to the State Highway System needed to accommodate projected growth. This includes traffic impact mitigation fees specifically for direct or cumulative impacts to the State highway system mainline, intersection or interchange, for improvements, right of way preservation and dedication for future system expansion needs and, the development of alternative mitigation strategies, such as transit and Transportation Demand Management alternatives.

Climate Adaptation

Assembly Bill (AB) 32 was signed into law in 2007 by Governor Schwarzenegger, and requires the State to reduce its greenhouse gas (GHG) emission levels by 2020 to the 1990 levels. To help achieve this, in 2008, Senate Bill (SB) 375 was signed into law and will require the California Air Resources Board (CARB) to develop regional greenhouse GHG emission reduction targets for cars and light trucks for each of the State's 18 Metropolitan Planning Organizations (MPOs). The MPOs are required to develop plans to meet their regional GHG reduction target through either the financially constrained sustainable communities strategy as part of their RTP or as an unconstrained alternative planning strategy.

Public Participation

Caltrans is committed to a continuous and comprehensive public communication and outreach process to maximize external input into our planning activities. In particular, local residents can provide valuable information regarding the needs of facility users, the character of the community, the design specifications desired, and educate the planning team about historical safety and congestion patterns. Seeking input from the community as early as possible helps avoid

potential problems and makes the acceptance of the residents to changes a much easier process.

A successful public participation process involves understanding the local governments and the community, and determining the best way to solicit public feedback on all aspects of proposed State highway improvements. Caltrans employs a number of communication methods including websites, public meetings, fliers and newsletters, attending local government and community meetings such as Citizen Advisory Committees, Technical Advisory Committees and board meetings, to provide updates, and accepting written and verbal comments. The District is continuously exploring new methods of reaching out to the public to ensure they have the opportunity to participate in the development of plans and projects that affect their daily lives.

Complete Streets

Caltrans views all transportation improvements as opportunities to improve safety, access and mobility for all travelers in California and recognizes bicycle, pedestrian and transit modes as integral elements of the Deputy Directive 64-R1, *Complete Streets-Integrating the Transportation System*, as policy to develop integrated multimodal projects in balance with community goals, plans and values. By considering "complete streets" early in the system planning process, a transportation facility that is planned, designed, operated and maintained to provide safe mobility for all users will ensure that travelers of all ages and abilities can move safely and efficiently across a fully integrated transportation network.

Context Sensitive Solutions

Caltrans understands the value of input from local agencies and the public in the planning process. To ensure this occurs, Caltrans established the Director's Policy for Context Sensitive Solutions, Deputy Directive 22, which requires the District to:

> *...use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.*

Caltrans looks beyond the basic highway guidelines and tries to design projects that incorporate the character and needs of local communities. This involves looking at a broader range of solutions, including aesthetic design elements, to ensure the local communities can retain their existing character while maintaining a safe and effective transportation system. To achieve such goals, Caltrans has

become more inclusive of local agencies and the public within the planning and design processes to ensure the proper elements are included in our projects that protect the character and spirit of local communities.

Caltrans published the *Main Streets: Flexibility in Design and Operations* guide in July 2002 to address the concepts, limitations and concerns that local areas face when a state highway is *Main Street*. The challenge is to maintain these "Main Streets" promoting livable communities while ensuring and maintaining the purpose of the state highway for regional and interregional travel.

Within the District, several State highways traverse the downtown areas of communities. These conventional "Main Street" highways also serve local traffic and are characterized by stop signs or signalized intersections, on-street parking, slower speed limits, and pedestrian activity at adjacent commercial establishments.

Smart Mobility Framework

A new concept in California transportation planning is an approach called the *Smart Mobility Framework*. The Smart Mobility Framework is a basis for policy and action that responds to the transportation needs of the State's people and businesses, the mandate to address climate change and the commitment to a transportation system that advances social equity and environmental justice.

As the forecasts of an increased population continue to climb in California, communities are looking to tie-in land use planning with traditional transportation planning concepts. This concept is known as *Regional Blueprint Planning*. This concept is a key cornerstone of the Smart Mobility Framework's goal of mobility and sustainability.

Caltrans has traditionally been identified as the owner and operator of the State Highway System. However, Caltrans' responsibilities have expanded significantly over the years to include passenger rail, goods movement, mass transit, aeronautics, bicycles, and other mobility areas. The DSMP will evaluate the existing and future transportation systems within the District.

Title VI

Title VI of the 1964 Civil Rights Act states that "No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI prohibits recipients of Federal funds from actions that reflect "intentional discrimination" or that exhibit "adverse disparate impact discrimination" on the basis of race, ethnicity or national origin.

The District supports Title VI and actively engages the public and transportation stakeholders in the planning and project development process.

Access Control

District 10 supports access control and looks for opportunities to improve access control and management on the highway system. This is important to assist with maximizing the safety and operations of the transportation facility.

Access control is the regulation of public access to and from properties adjacent to highways while maintaining traffic flow on the highway. The primary purpose of access control is to increase the safety of the facility by controlling where vehicles enter, exit, or cross the highway. Controlling highway access also improves traffic operations and increases capacity. Access management techniques are most often applied to conventional highways, where it is important to work with the respective local government to provide access control and management. District 10 worked with the City of Los Banos to development an access management plan for State Route (SR)-152 and is currently working with Calaveras County and the City of Angels to develop a SR-49 access management plan.

One of the most beneficial techniques of access management is to limit the number of intersections and driveways along the highway. On highways where businesses develop without planning of driveway and intersection locations, interference from the roadside can become a major factor in reducing the capacity and increasing the potential for accidents. The District 10 Local Development and Intergovernmental Review staff along with staff from Traffic Operations and the Permits offices work closely to review and comment on proposed development that will impact the highways.

Freeway Agreements are used to document the understanding between Caltrans and the local agency relating to the planned traffic circulation features of a proposed freeway or expressway facility. The agreement shows which streets may be closed or connected to the freeway; which streets and roads may be separated from the freeway; the location of frontage roads; and how streets may be relocated, extended or otherwise modified to maintain traffic circulation in relation to the freeway. Agreements are often executed many years before construction is anticipated and they form the basis for future planning, not only by Caltrans, but also by public and private interests in the community. The legislative intent for requiring Freeway Agreements is to obtain the local agency's support of local road closures and changes to the local circulation system and to protect property rights and to assure adequate service to the community.

Section Four TRANSPORTATION PLANNING IN DISTRICT 10

The transportation system throughout California is a complex network of roads, highways, airports, railroads, ports, transit lanes and facilities and trails. The planning, design and funding for these modes and facilities in the State involves Caltrans, local governments and private entities collaborating together to improve mobility options for all travelers.

Transportation Agency Partners

District 10 consists of eight counties, ranging from the very rural Alpine County with 1,201 residents, to highly urbanized San Joaquin County with 689,480 residents. The District includes approximately 1.6 million people according to the 2009 California Department of Finance estimate.

Within District 10, there are three MPOs and five Regional Transportation Planning Agencies (RTPAs):

- Merced County Association of Governments (MCAG) MPO
- San Joaquin Council of Governments (SJCOG) MPO
- Stanislaus Council of Governments (StanCOG) MPO
- Alpine County Local Transportation Commission (ACLTC) RTPA
- Amador County Transportation Commission (ACTC) RTPA
- Calaveras County Transportation Commission (CCOG) RTPA
- Mariposa County Transportation Commission (MCTC) RTPA
- Tuolumne County Transportation Commission (TCTC) RTPA

Each of the three MPOs and the five RTPAs are responsible for preparing the RTP for their respective jurisdictions. The RTP is a long-range (20 years or more) plan that provides a blueprint for future transportation improvements and investments based on specific transportation goals, objectives, policies and strategies.

Key transportation agency partners also include Yosemite National Park, California Highway Patrol, county sheriffs, city and county planning and public works departments, San Joaquin Regional Transit District, Altamont Commuter Express, and the Port of Stockton.

Caltrans System Planning Process

System Planning is Caltrans' long-range (20-years) transportation planning process. It evaluates current and future operating conditions and deficiencies on the State transportation system. The process considers the entire transportation system, including highways and local arterials; transit services; railroads; airports; ports; non-motorized modes of transportation (i.e. bicycles and walking); goods movement; Intelligent Transportation Systems (ITS) and local land use plans.

All System Planning activities are conducted in a transparent environment where input is continuously and actively solicited from the District's external partner agencies, particularly the RTPAs and the cities and counties involved with guiding and approving local development. The District's objective is to come to an early consensus with our external partners regarding the capacity of the State Highway System facilities needed to accommodate local growth, ensuring transportation improvements accompany growth and continued improved mobility for all Californians.

The main products of the system planning process are as follows:

District System Management Plan

The DSMP is District 10's long-range strategic policy planning document describing the District's vision for the State Highway System's development, maintenance, and management for the next 20 years.

Corridor System Management Plans

Corridor System Management Plans (CSMPs) are developed throughout the State for corridors wherever funding is being used from the Corridor Mobility Improvement Account (CMIA) and Highway 99 Bond Programs created by the passage of the *Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006*, approved by the voters as Proposition 1B on November 7, 2006.

The CSMP development effort in District 10 addresses six interregional corridors, including Interstate 205/Interstate 5 (I-205/I-5), State Route 99 (SR-99), State Route 219 (SR-219), State Route 4 (SR-4), and State Route 108 (SR-108). *Figure 2* on Page 18 depicts the location of the District's CSMP corridors.

Figure 2: **CSMP Corridors**

CSMPs provide for the integrated management of travel modes and roadways so as to facilitate the movement of people and goods within our most congested transportation corridors. Each CSMP presents an analysis of existing and future traffic conditions and proposes strategies to maintain and enhance mobility within each corridor, primarily focusing on low-cost, operational improvements and daily system operational activities.

The corridor management planning strategy is based on the integration of system planning and system management. Each CSMP addresses State highways, parallel and connecting roadways, regional transit services, bicycle facilities, as well as other regional transportation-related modes pertinent to corridor mobility.

Transportation Concept Reports

The TCR is a long-term planning document that each Caltrans District prepares for every State highway in its jurisdiction. The purpose of the TCR is to determine how the State highway will be improved and managed over a 20-year period so that it maintains a minimum acceptable LOS.

Each TCR presents an overview of the routes current condition, information regarding programmed improvements, significant factors influencing the route's existing and future condition, traffic projections, the concept (minimum acceptable LOS for the 20-year planning horizon) and the State highway facility (concept facility) required to maintain the concept LOS. The TCR also includes an *Ultimate Concept*, which is a long-term vision for the highway facility beyond the 20-year planning horizon.

The objective is to have local, regional, and State consensus on the future corridor needs so that Caltrans and its partners can plan and develop the improvements needed to maintain the concept LOS. District staff and the external partners can use the TCR as input for general plans, specific plans, regional transportation plans and other planning documents and processes. For routes that have a CSMP, the CSMP serves as the TCR for the overlapping segment.

Transportation System Development Program

The District 10 Transportation System Development Program (TSDP) identifies the major transportation system improvements needed to maintain regional and interregional mobility and decrease traffic congestion, including, but not limited to, the needed improvements identified in each TCR and in local and regional transportation and transit plans.

The TSDP addresses the movement of people and goods in every major transportation corridor in District 10. Caltrans District 10 is responsible for operating and maintaining more 1,328 centerline miles of State highways. Proposed improvements are based on facilitating strategic growth strategies, including the implementation of the Regional Blueprint Planning processes. Although the TSDP is not financially constrained, most of the projects in the TSDP are included in the financially-constrained RTPs prepared by each of the eight regional transportation planning agencies in the District.

Section Five

STATE TRANSPORTATION SYSTEM

State highways serve a varied range of needs for the interregional, statewide, national and international movement of people and goods. Economic sectors as diverse as recreational travel and tourism, mining and manufacturing, and goods movement are supported and underlain by the state highways (*Caltrans, Inter-regional Transportation Strategic Plan, 1998*). Today, there are 265 State highways in California with over 50,000 lane miles.

The transportation system in District 10 is comprised of State highways, goods movement, and mass transportation systems. These systems provide mobility throughout the district and beyond district boundaries. Other modes, such as the Stockton Airport and Port of Stockton are also included.

State Highway System

District 10 maintains 3,484 lane miles and 1,328 centerline miles of Interstate and State highways. All Interstate Routes within the District are freeways. Intersections at freeways are grade separated with interchange structures, whereas intersections at expressways are not grade separated.

The State Highway System constitutes only a portion of the road system within District 10. The remainder consists of local streets and roads. Together these make up the intra-regional highway network.

Planning for the intra-regional highway system is accomplished by local general purpose governments, (i.e. cities and counties) and transportation planning agencies, (i.e. RTPAs or MPOs). Local transportation plans are included in general plans (circulation elements) addressing needs and priorities established by local governing bodies. Where a locally originated highway improvement project utilizes the State Highway System, District 10 becomes involved as either the lead agency or in an oversight role.

The highways are functionally classified as Interstates, United States Routes, and State Routes and are defined below:

Interstate Highways - The interstate system is a network of highways that are considered to be of national importance and are constructed with federal-aid interstate funds. Interstate highways in District 10 are I-5, I-205 and I-580.

United States Routes - The United States (US) Route system is a network of State highways that are considered to be of statewide and national importance. Although used as a guide for interstate travel, they are not under federal control. There are no US Routes in District 10.

State Highway System - The State Highway System in District 10 accommodated 9.4 billion VMT in 2007. This accounted for 58 percent of all VMT (*Table 1*) throughout District 10 (including non-State highway roads).

Table 1: 2007 Annual VMT by County on District 10 SHS Routes

County	SHS VMT (In Millions)	Total County VMT (In Millions)	% SHS VMT of Total County VMT
Alpine	45	57	79%
Amador	260	367	71%
Calaveras	244	385	63%
Mariposa	122	260	47%
Merced	1,481	2,201	67%
San Joaquin	3,990	6,332	63%
Stanislaus	1,362	3,395	40%
Tuolumne	300	563	53%
Total	7,804	13,560	58 %

State Routes – State Routes (SR) are legislatively designated State highways that serve intrastate and interstate travel but are not classified as Interstates or US routes. The District 10 State highways are numbered: SR-4, SR-12, SR-16, SR-26, SR-33, SR-41, SR-49, SR-59, SR-88, SR-89, SR-99, SR-104, SR-108, SR-120, SR-124, SR-132, SR-140, SR-152, SR-165, SR-207, and SR-219. SR-65 through Merced, Stanislaus and San Joaquin counties, and SR-130, SR-234, SR-235 and SR-239 all within San Joaquin County are legislatively designated State highways but are currently unconstructed.

SR-99 has been deemed eligible for consideration to Interstate status, but the process to implement that status has not been initiated in District 10 due to limited funding, sub-interstate standard facilities and competing priorities. However, the District will continue to track this issue and respond as appropriate in cooperation with partner agencies.

Interregional Road System

The Interregional Road System (IRRS) was identified in statue in 1989. The IRRS serves interregional people and goods movement. It then included 81 State highway routes (or portions of routes) out of the 249 routes comprising the entire State Highway System. Six additional routes have been added to the system since that time by locally sponsored legislation, so they are currently 87 IRRS routes.

The fifteen IRRS routes and route segments within District 10 (*Figure 3*) are listed below:

- SR-4 in San Joaquin, Stanislaus, Calaveras, and Alpine Counties
- I- 5 in Merced, Stanislaus, and San Joaquin Counties
- SR-12 in San Joaquin and Calaveras Counties
- SR-16 in Amador County
- SR-49 in Mariposa, Tuolumne, Calaveras, and Amador Counties
- SR-88 in San Joaquin, Amador, and Alpine counties
- SR-89 in Alpine County
- SR-99 in Merced, Stanislaus, and San Joaquin counties
- SR-120 in San Joaquin, Stanislaus, Tuolumne, and Mariposa Counties
- SR-132 is an IRRS route between I-580 in San Joaquin County and SR-99 in Stanislaus County
- SR-140 is an IRRS route between SR-99 in Merced County and Yosemite National Park
- SR-152 in Merced County
- I- 205 in San Joaquin County
- SR-207 in Alpine County
- I- 580 in San Joaquin County

Figure 3: District 10 Interregional Routes

High Emphasis Routes

High Emphasis Routes, segments of highways which have been identified as being the most critical routes in the IRRS, are a priority for programming and construction to minimum facility standards. High emphasis routes are also priority candidates for projects intended to relieve congestion or facilitate goods movement.

The six highways in District 10 (*Figure 4*) which have the designation as High Emphasis Routes are listed below:

- I- 5
- SR-99
- SR-120
- I- 205
- I- 580
- SR-152

Figure 4: District 10 High Emphasis Routes

Focus Routes

Focus Routes, a higher priority subset of High Emphasis Routes, are earmarked for completion to minimum facility standards by the year 2018. Completion of the Focus Routes to minimum facility standards will serve higher volume interregional trip movements and connections. Two of the six High Emphasis Routes in District 10 that are also designated as being Focus Routes are listed below and illustrated in *Figure 5*.

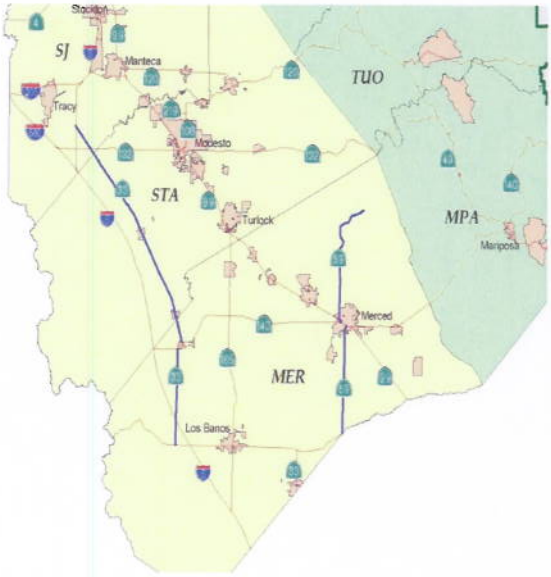
- SR-99. The minimum facility standard for SR-99 is freeway.
- SR-152. The minimum facility standard for SR-152 is an expressway.

Figure 5: District 10 Focus Routes

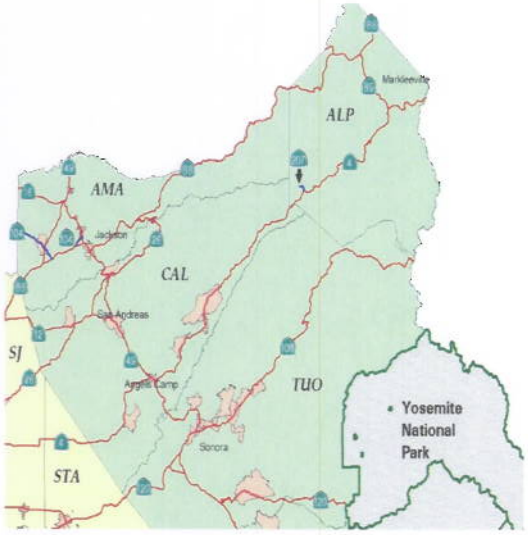
Arterials and Collectors

All of District 10's Interstates and State highways are classified as either arterials or collectors. The four highways listed below are classified as collectors (*Figure 6*).

- SR-33 from the junction of SR-152 in Merced County to the junction of I-5 in San Joaquin County.
- The entirety of SR-59 in Merced County.
- The entirety of SR-104 in Amador County.
- The entirety of SR-207 in Alpine County.



District 10 Valley Collectors



District 10 Mountain Collectors

Figure 6: District 10 Valley Collectors and Mountain Collectors

Scenic Routes

District 10 has a variety of scenic corridors, officially designated, or eligible but not officially designated, in the State Scenic Highway System (*Figure 7*). Portions of the State Highway System are designated as State scenic highways to establish the State's responsibility for the protection and enhancement of California's natural scenic beauty along those routes by identifying those portions of the State Highway System which, together with the adjacent scenic corridors, will require special scenic conservation treatment. The Scenic Highway System

includes not only the pavement or traveled roadway but also the entire publicly-owned right-of-way. Customary accessory uses usually found in the right-of-way include bridges, drainage facilities, public utilities, walkways and trails, protective planting and landscaping, rest areas, and vista points.

Official Scenic Highways:

- I- 5 between the junctions of SR-152 in Merced County to the I-580 in San Joaquin County.
- SR-152 between the Santa Clara/Merced County line to the junction of I- 5 in Merced County.
- SR-140 in Mariposa County from the junction of SR-49 to the border of Yosemite National Park.
- SR-4 from east of Arnold in Calaveras County to the junction of SR-89 in Alpine County.
- SR-88 from Dew Drop Station in Amador County, to the Nevada State Line in Alpine County.
- The entirety of SR-89 in Alpine County.

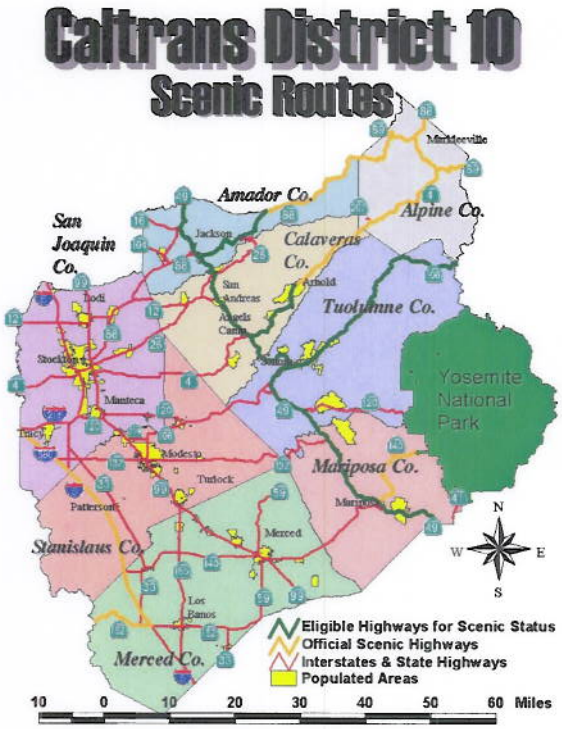


Figure 7: District 10 Scenic Routes

Eligible as State Scenic Highways, but not officially designated:

- SR-49 in its entirety through Mariposa, Tuolumne, Calaveras, and Amador Counties.
- SR-108 from the junction of SR-120 in Tuolumne County to the Mono County line.
- SR-4 from the junction of SR-49 to east of Arnold in Calaveras County.
- SR-88 from the junction of SR-49 to Dew Drop Station in Amador County.

Express Lanes

Express Lanes, also known as High Occupancy Vehicle (HOV) lanes are a critical element in maintaining future mobility throughout District 10. HOV lanes move more people in fewer vehicles then a mixed flow lane. *Figure 8* on the following page depicts the priority planned HOV lanes in District 10.

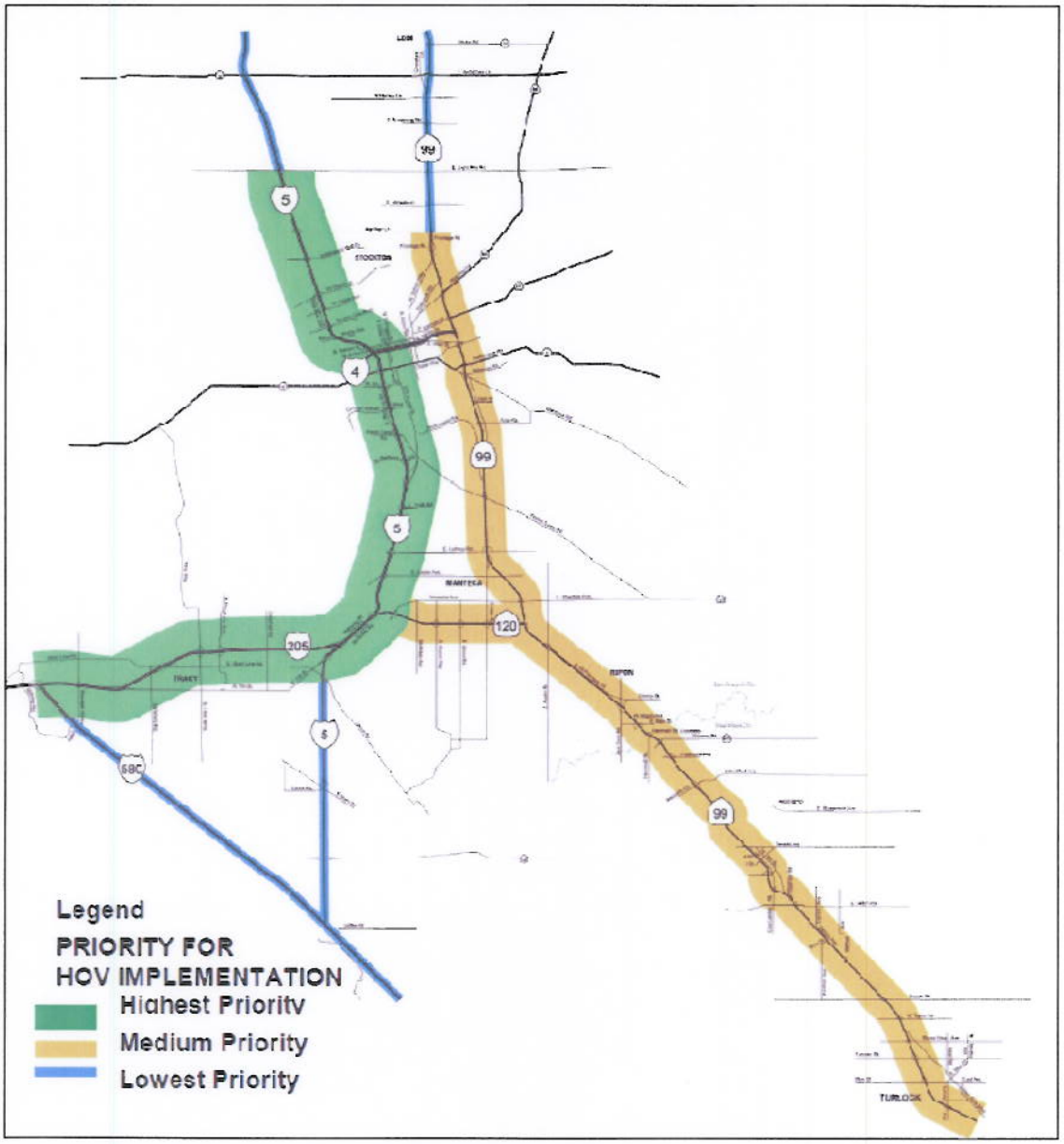


Figure 8: District 10 Northern San Joaquin Valley Regional Ramp Metering and HOV Lane Master Plan

Intelligent Transportation Systems

Intelligent Transportation System (ITS) applications, refers to the integration of advanced sensor, computer, electronics and communications technologies and roadway management strategies that provide an opportunity to increase the safety and efficiency of the transportation system at minimum cost. Listed below are a few of Caltrans' ITS elements:

Changeable Message Signs

Changeable Message Signs (CMS) advise motorists of road conditions ahead, such as incidents and lane restrictions.

Highway Advisory Radio

Highway Advisory Radio (HAR) is intended to provide more specific traffic information to the traveler than is currently available from traditional broadcast traffic reports.

Traffic Monitoring Stations

Traffic monitoring stations (TMS) monitor traffic conditions on a roadway by noting the speed, volume and occupancy of each traffic lane.

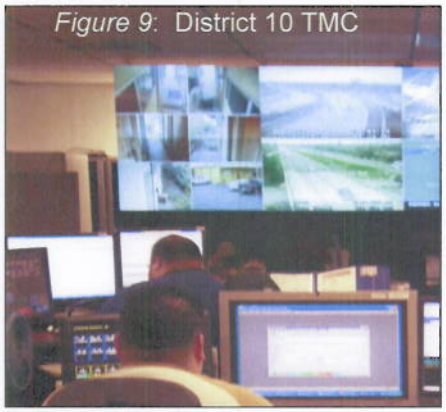


Figure 9: District 10 TMC

Closed Circuit Television Cameras

CCTVs are used primarily for incident verification, assessment and management. CCTV allows operators at the transportation management centers (TMC), *Figure 9,* to identify the exact location and nature of anything that adversely affects highway traffic.

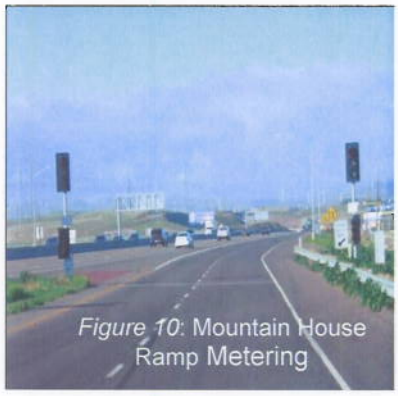


Figure 10: Mountain House Ramp Metering

Ramp Meters

Located at congested on-ramps, ramp meters vary the rate at which vehicles enter the freeway during peak commute periods so that the freeway's capacity at some downstream point is not exceeded. Currently, the only location in District 10 that has activated ramp meters is located at the Mountain House Parkway interchange on I-205 near Tracy.

Figure 11, below, identifies the Northern San Joaquin Valley Regional Ramp Metering and HOV Lane Master Plan proposed priorities for ramp metering implementation in San Joaquin and Stanislaus counties. The proposed ramp metering implementation priorities for Merced County are illustrated in *Figure 12*. These priorities reflect different implementation timeframes as follows: high priority segments (5 to 10 years), medium priority segments (10 to 20 years), and low priority segments (15 to 25 years). While some segments are candidates for the immediate implementation of ramp metering, the necessary equipment has

not yet been installed and therefore a lead time of five years was assumed for high priority segments.

Figure 11: Recommended Priorities for Ramp Metering (San Joaquin & Stanislaus)

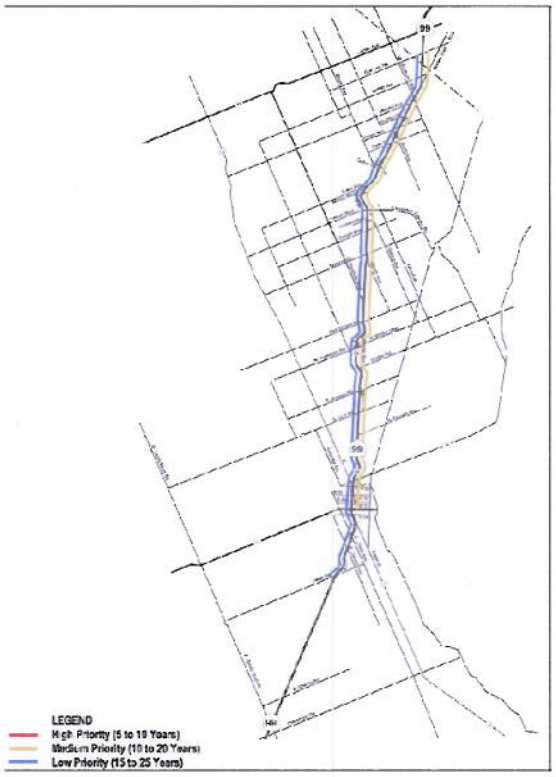


Figure 12: Recommended Priorities for Ramp Metering (Merced)

Roadway Weather Information Systems

Roadway weather information systems (RWIS) consist of sensors installed in the travel lanes of the highway to detect whether moisture is present. Caltrans District 10 uses a sophisticated multi-sensor automated warning system composed of roadside weather stations, visibility meters, and traffic monitoring stations to reduce accidents and delays due to adverse conditions.

***Figure 13*: RWIS sensors and changeable message sign alert**

Other ITS technologies

Smart call boxes, which allow stranded motorists to call for help also sense weather conditions such as fog. Weigh-in-motion sensors and pass systems for commercial vehicles allow vehicles to pass without delay.

Transportation Management Center

Effective ITS implementation requires coordination of all components. The TMC (*Figure 9*) plays an important role in day-to-day system management, providing coordinated incident responses, as well as integration of various systems. An example of integration would be the coordination of ramp metering and arterial signal management. Traveler information also requires sharing data with public and private partners. Different agencies (such as Caltrans District 10, CHP, and the media) play different roles and different systems for incident management. The TMC integrates these roles and systems in one location to optimize performance.

Goods Movement

By the year 2020, California's population is expected to increase to over 44 million people. Consumption of goods will grow accordingly and the volume of goods is expected to as well. This growth demands that direct action be taken to maintain and improve the State's goods movement transportation system.

The three valley counties in District 10 contain major conduits for goods movement travel and are an important warehousing and distribution center for Northern California. The area has significant highway and gateway corridors, key freight rail lines, a maritime port, and air cargo facilities which serve a variety of purposes related to freight movement through the area to local, statewide, national and international destinations.

The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B on November 7, 2006, provided $2 billion to be transferred to the Trade Corridors Improvement Fund (TCIF) for infrastructure improvements along corridors that have a high volume of freight movement. The funds are available, upon appropriation by the Legislature for allocation by the California Transportation Commission (CTC).

The CTC recently awarded SJCOG Proposition 1B CMIA TCIF to extend the SR-4 Crosstown Freeway in Stockton to improve goods movement and access to and from the Port of Stockton. The Port was also awarded TCIF funds to deepen the Stockton Ship Channel for improved access to the San Francisco Bay. Both projects are expected to significantly reduce truck related congestion on I-205 and I-5. See Table 2 below for details.

Table 2 **: Amended TCIF Program of Projects 12/10/09**	**County**	**Const. Start**	**Total Project Cost (1,000)**	**TCIF Funding (1,000)**
SR-4 West Crosstown Freeway Extension Stage I	SJ	June-13	$193,640	$96,820
San Francisco Bay to Stockton Ship Channel Deepening Project	SJ	June-12	$141,447	$17,500
San Joaquin Valley Short Haul Rail/Inland Port Project	STA	June-10	$57,434	$22,467
Sperry Road Extension Project	SJ	May-11	$63,000	$30,000

Rail

Right of Way

Most of the rail right of way (ROW) in District 10 is privately owned and maintained by two companies, the Burlington Northern Santa Fe (BNSF) Railway and Union Pacific (UP). These companies provide nationwide freight service through cooperative agreements with other providers. They also lease ROW for passenger service, to Amtrak and Altamont Commuter Express (ACE). There are also many smaller railroad lines and companies operating within District 10.

Railroad Crossings

Railroad at-grade crossings can create congestion and delay on state highways. Railroad crossings are within railroad company ROW and are regulated by the Public Utilities Commission. Caltrans has no jurisdiction within the railroad ROW. At-grade crossing areas cited most frequently for crossing concerns were in Modesto at the southeast end of the downtown area and on the eastern end of the Beard Industrial Park in the community of Empire, where the BNSF railroad tracks cross SR-132 at the intersection of SR-132 and Santa Fe Avenue. Other areas of concern are found in Los Banos and Stockton.

Freight Facilities

BNSF offers intermodal service from two facilities in District 10, Stockton and Modesto. The Stockton terminal can be accessed by both SR-99 via Mariposa Road or Arch Road. The Modesto terminal is located at the Beard Industrial Park. Connections to UP are provided through the Modesto and Empire Traction Company.

Union Pacific offers two intermodal terminals in District 10, located in Lathrop and Modesto. The Lathrop terminal is located on East Roth Road in French Camp. The Modesto intermodal terminal is located on Crows Landing Road, southwest of SR-99.

Trucking

The most important truck routes in the San Joaquin Valley are I-5 and SR-99, which together account for 24 of the 25 highest volume truck routes in the State Highway System. I-5 carries mostly longer-haul international, interstate and interregional traffic while SR-99 is an important local and intra-valley route. There are a number of connectors within District 10 including SR-4, SR-120, SR-132, SR-140, and SR-152, in addition to I-205 and I-580, that provide east-west movement between the San Joaquin Valley and the San Francisco Bay Area.

Large trucks play a very important role in the region's trucking system, with 5+ axle trucks making up over 20 percent of the total Annual Average Daily Traffic in some locations along SR-99. A variety of route designations restrict the largest trucks to a particular set of roadways. Surface Transportation Assistance Act (STAA) trucks are the largest vehicles which may operate on California's highways. STAA trucks are defined as tractor-trailer combinations more than 65 feet in length or with a kingpin to rear axle length greater than 40 feet. These trucks are restricted to a designated STAA network. In addition to the main STAA routes, STAA terminal access routes have been designated to provide access to intermodal terminals and industrial areas. However, there are a number of locations in the San Joaquin Valley with significant truck activity that do not have access to the STAA route system.

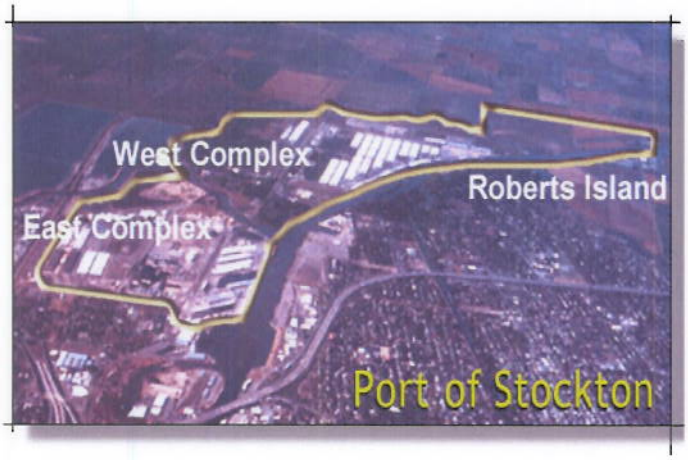
Less than ideal surface street connections to major industrial areas delay trucks and motorists alike due to poor geometrics and congestion. One problem area is access to the Beard Industrial Park along SR-132 in downtown Modesto. Trucks have a difficult time navigating through the congestion and making turns on the city streets. Another problem area is access to the Port of Stockton where trucks must navigate through a residential area to get to the Port from the freeway. A planned extension of the Crosstown Freeway will alleviate some of the problem.

The Port of Stockton

The Port of Stockton is located 75 nautical miles east of the Golden Gate Bridge. The San Francisco-Stockton Deep Water Ship Channel runs through the Sacramento-San Joaquin River Delta and can accommodate 45,000 to 55,000 ton-class ocean-going vessels up to 900 feet in length and no width restrictions. The Port of Stockton is provided with rail service from the UP and the BNSF railroads. Both are transcontinental rail lines. Interstate 5 is one mile away, as is the junction to SR-4, which connects with SR-99. This provides access for trucks with statewide, national, and international destinations.

The Port Authority has been designated as Foreign Trade Zone (FTZ) #231. This includes the Port of Stockton, Rough and Ready Island, and the Stockton Metropolitan Airport. Customs duties on imported goods entering the FTZ can be

delayed until the cargo is removed from the zone. Goods can be stored, handled, manufactured, exhibited, and even disposed of in the FTZ free of any duty. There is also no duty paid if the merchandise is exported directly from the zone.



Improving access to the Port of Stockton is greatly needed. The Port of Stockton has completed the Port of Stockton Master Plan 2001, outlining development and ultimate build out, which also verifies the need to develop increased circulation to and from the Port.

Airports

While Caltrans does not control air travel, it performs those safety functions that are not the responsibility of the federal government such as permitting and inspecting public and special use airports and heliports and performing evaluations of school and State facilities within two miles of an airport. The federal government inspects commercial service airports (CSA) to ensure compliance with FAA safety regulations. Caltrans develops plans coordinating the State aviation system, provides grants and loans for planning, development and maintenance, evaluates environmental impacts and administers noise regulations. This program is administered from Sacramento; however, the District has a role in facilitating the movement of people and goods to and from the airport on the State Highway System.

Every county in District 10 has at least one general aviation airport available for public use. There are also privately-owned airports available for public use. There are three major general aviation airports and three former military airports in District 10.

Stockton Metropolitan Airport

The Stockton Metropolitan Airport is the largest publicly-owned airport in District 10. It is certified for aircraft up to 747 in size and is the only airport in San Joaquin County with air cargo service. Allegiant Air, the Las Vegas-based airline, provides commercial passenger service. Negotiations are underway to bring more airlines into the airport. The military also uses the airport for training and support activities.

Prepared By:
San Joaquin Partnership

Stockton Metropolitan Airport

The airport can be accessed from SR-120 in Manteca via Airport Way or from SR-99 via Arch Road. The City of Stockton currently has plans to extend Arch-Sperry Road to I-5 and add an interchange to the freeway, providing further accessibility. There is interest in eventually linking bus and rail service from the proposed Stockton Multimodal station to the airport.

Modesto City-County Airport

Located at southeastern edge of the City, Modesto City-County Airport provides the only commercial air service in Stanislaus County. United Express offers daily scheduled commuter flights between Modesto and San Francisco. The airport can be accessed from SR-99 and from SR-132. Modesto Area Express (MAX) has a transit stop one quarter mile from the airport.

Merced Municipal Airport

Merced Municipal is a basic transportation airport providing commercial air and freight service. Scenic Airways provides regularly scheduled commuter flights between Merced and Las Vegas. The airport can be accessed from SR-59, SR-99 and SR-140.

Former Military Facilities

Castle Airpark in Atwater, Crows Landing Naval Auxiliary Landing Facility near Crow's Landing in Stanislaus County, and Sharpe Defense Depot in Lathrop are

former military facilities. Plans are underway to develop and reuse each site as multipurpose air facilities.

Mass Transportation

For the purposes of the DSMP, there are 47 transit service providers within District 10. Transit services include Amtrak and ACE passenger rail services, as well as 45 bus systems and other services that utilize the public highways. With the exception of interregional rail service, all public transit planning and service delivery decisions are made by local governments and/or local transit providers.

Buses and Other Transit Services

Transit services are intended to serve two public policy objectives:

1. Reduce dependence on the private automobile as the primary means of travel, particularly home to work travel;

2. Increase mobility of those who are unable to or prefer not to travel by private automobile, e.g. the economically disadvantaged, the disabled, the young, and the elderly.

Greyhound is the primary private transportation provider for the public because of its size and coverage area. Other public transportation providers are geared exclusively for elderly or disabled individuals, or for medical transportation. Types of routes listed include fixed route, deviated fixed route, dial-a-ride, and demand response.

- A ***fixed route*** transit provider follows a set route with a set schedule.
- A ***deviated fixed route*** provider follows a fixed route, but can slightly deviate of the route, usually no more than ½ mile, to pick up or drop off passengers. Advance notice is required, usually from an hour's notice to a week's notice.
- ***Dial-A-Ride*** will pick up and drop off passengers at various locations, when called upon by the passenger. Advance notice is required varying from an hour's to a week's notice.
- ***Demand response*** service only runs when called upon. This type of service can be found in Mariposa and Alpine counties where the population is very small and spread out over a large area.

Passenger Rail Service

Two passenger rail service providers operate within District 10; Amtrak and ACE. Amtrak operates the San Joaquin Corridor Intercity Service which consists of four daily round trips between Bakersfield and Oakland, and one round trip between Bakersfield and Sacramento plus interconnecting bus service. There is also a ticket honoring agreement with ACE. The State recently completed $60 million in capital improvements on the BNSF portion of the San Joaquin route to increase passenger service capacity to six round trip trains per day. Interregional rail service is provided by the Caltrans Rail Program in cooperation with Amtrak.

Passenger Facilities

There are five San Joaquin Amtrak passenger stations within District 10. These stations are located in Merced, Turlock/Denair, Modesto, Stockton, and Lodi. Merced and Lodi are designed to be multi-modal facilities, serving Amtrak, Greyhound, and local bus systems. Stockton also has plans to build a new multi-modal facility.

Amtrak San Joaquin Line

Amtrak operates the San Joaquin Corridor Intercity Service which consists of four daily round trips between Bakersfield and Oakland, and one round trip between Bakersfield and Sacramento plus interconnecting bus service from Stockton to Lodi/Sacramento, San Jose, Yosemite, and the ACE stations. There is also a ticket honoring agreement with ACE. The State recently completed $60 million in capital improvements on the BNSF portion of the San Joaquin route to increase passenger service capacity to six round trip trains per day.

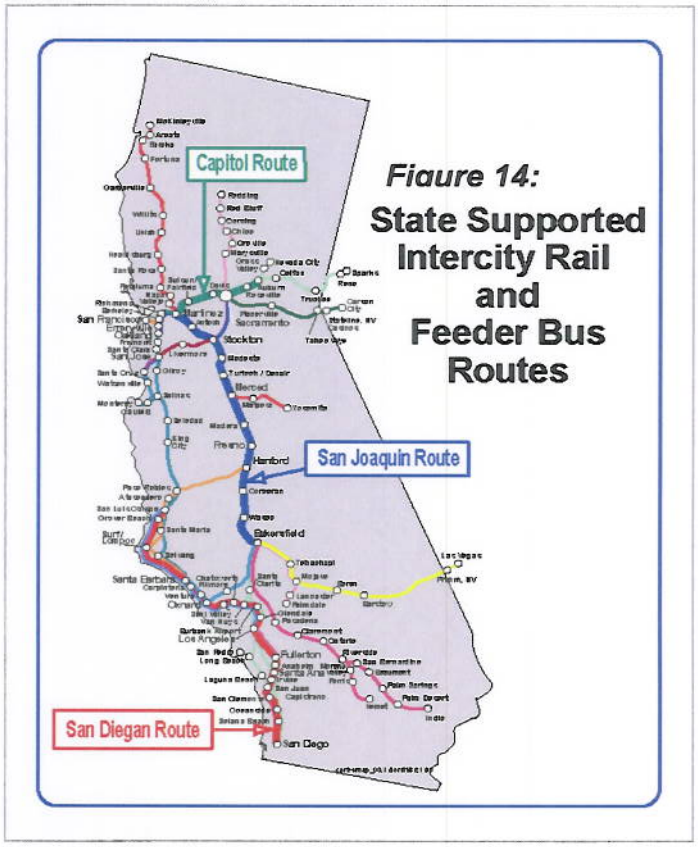


Figure 14: **State Supported Intercity Rail and Feeder Bus Routes**

Amtrak Buses

More than 60 percent of all San Joaquin passengers use at least one connecting bus for their trip. There are ten thruway bus routes

that connect with the San Joaquin's. Three of these routes are at least partially within District 10 (see *Figure 14* on previous page). The first bus route runs from between Stockton and Sacramento. The second route consists of a connection between Stockton and San Jose. The third Amtrak bus route runs from Merced and Modesto to Yosemite National Park with stops in Mariposa, Midpines, and El Portal. There are additional frequencies for parallel ACE passengers.

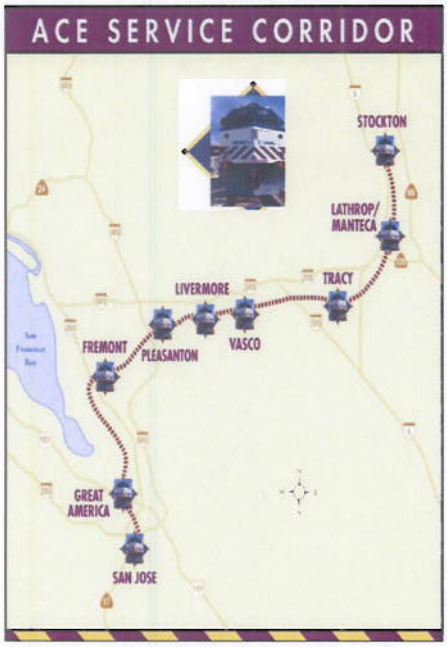


***Figure 15*: ACE Service Corridor**

Altamont Commuter Express

ACE provides an attractive commute alternative that reduces congestion on routes I-205, 580, 680, and 880 freeways (*Figure 15*). An ACE ridership survey found that 80 percent of the passengers where previously solo drivers. ACE ridership has climbed steadily, serving over 50,000 passengers per month with standing room only, almost 4,000 riders a day. The 85-mile corridor parallels I-580 and I-680, two of the most congested highways in the San Francisco Bay Area and has proven to be a successful program because it has multi-regional support, a strong funding foundation, and provides an attractive, time and cost saving alternative to driving alone.

As the High Speed Rail project moves forward, the vision is to transform the existing ACE into the new **Altamont Corridor Express**—a faster, expanded intercity service with better regional connections and a dramatically streamlined system. The goal is to run state-of-the-art electric trains that will be more comfortable, faster, cleaner and greener. The system will work for our communities on many levels, allowing quick trips between cities, commuter access to job centers, easy connections to local transit systems, and access to California's planned High-Speed Train network.

Yosemite Area Regional Transportation System (YARTS)

YARTS evolved with the goal to improve transportation service within the Yosemite region. Yosemite National Park had an interest in reducing the number of single

family vehicles entering the park to reduce the air quality impacts facing the region. Public demand to visit Yosemite Valley exceeded the available parking, forcing the National Park Service to turn away visitors. Four million people visit Yosemite annually with approximately 12 percent coming to the park from out of State or out of the country. Bus service to the Park lessons the impact of providing parking, dealing with increasing congestion and air pollution and provides a pedestrian and bicycle friendly outdoor experience.

The map on the following page (*Figure 16*) shows the YARTS Bus stops and their routes to and through the Park.

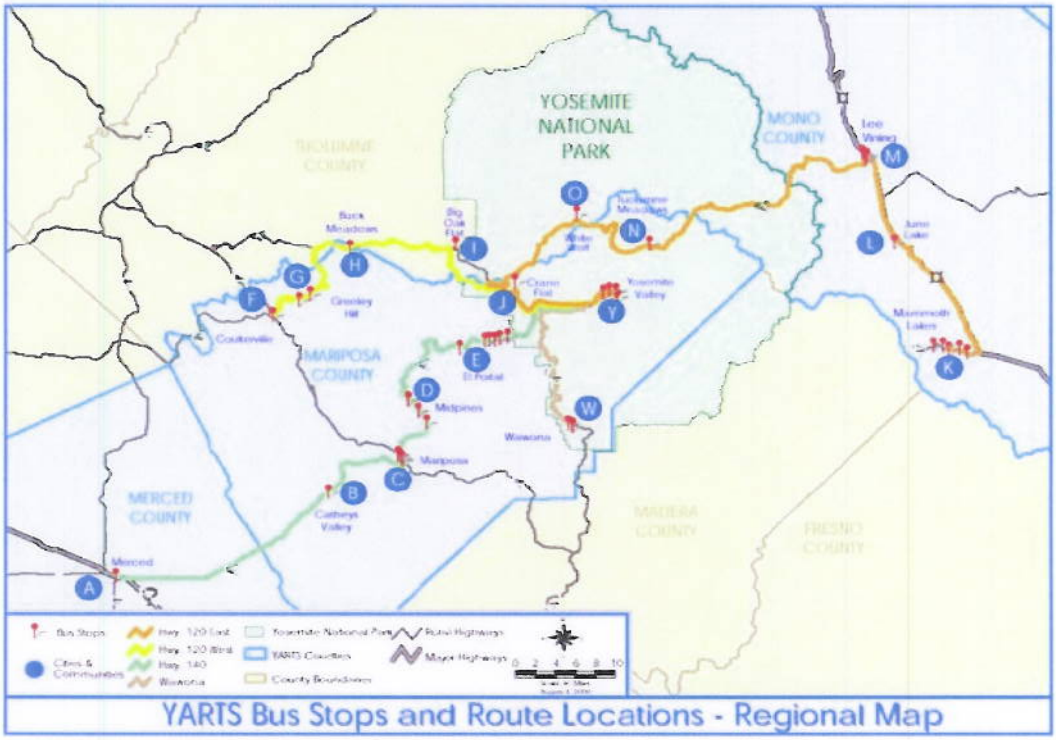


Figure 16: Yarts Bus Stops and Route Locations

High Speed Rail

High-speed rail has been studied in California for decades. Senate Concurrent Resolution 6 (1993) established the Intercity High-Speed Rail Commission. The Commission found that high-speed rail is technically, environmentally, and economically feasible, and once constructed, could be operationally self-sufficient. Proposition 1A provided $9.95 billion in initial funding for the project:

"*To provide Californians a safe, convenient, affordable, and reliable alternative to driving and high gas prices; to provide good-paying jobs and improve California's economy while reducing air pollution, global warming greenhouse gases, and our dependence on foreign oil, …to establish a*

clean, efficient high-speed train service linking Southern California, the Sacramento San Joaquin Valley, and the San Francisco Bay Area,..."

In addition, Proposition 1A, the *Safe, Reliable High-Speed Passenger Train Bond Act* approved by voters on November 4, 2008 ensures that complementary rail capital improvements, such as the Altamont Corridor Express, will be funded by a $950 million local portion of bond funds. These funds must be allocated to intercity, commuter and urban rail systems and shall provide direct connectivity and benefits to the high-speed train system and its facilities or be part of the construction of the system.

The project is currently in the environmental review stage, expected to start construction in 2012, and ultimately cost $45 billion. The first phase of the system is expected to run from Anaheim to San Francisco be completed by 2020. High speed rail will reduce travel times for train riders, save 12.7 million barrels of oil per year by 2030, reduce air pollution and related health care costs, remove 12 billion pounds of CO2 per year by 2030, generate more than $1 billion in annual revenue, reduce automobile accidents and related health care costs, and reduce delays to travelers using highways and airports by reducing congestion.

Additional information is available at http://www.cahighspeedrail.ca.gov/ .

Non-Motorized Travel

This category includes non-motorized means of travel such as bicycles, walking and wheelchairs. Federal and state law requires that the needs of non-motorized travelers be fully considered in all transportation planning, construction and operations activities. With respect to the State Highway System this generally means that highways must not unreasonably impede non-motorized travel. Also, unless alternative facilities are provided, such as sidewalks or alternative routing, non-motorized travelers are entitled to use paved streets and highways alongside conventional vehicles.

Bike and Pedestrian Routes

District 10 maintains over 1,150 miles of highways that is open to bicycle travel. Bicycle facilities generally fall into three distinct categories:

Class I: Class I bicycle paths are physically separated from the roadways. There are seven in the District:

- Merced County:
  - Paths along portions of Black Rascal and Bear Creeks (Merced)
- San Joaquin County:

- Manteca Tidewater Bikeway
- Stockton Pixley Slough Bike Path
- Calaveras River Bike Path.

- Stanislaus County:
  - "T" Street (Newman)
  - Canal Drive, from Colorado to Berkeley Avenues (Turlock)

- Tuolumne County:
  - Designated bicycle path fronting the Crossroads Shopping Center in Sonora.

There are also many Class II and III bicycle paths within District 10. Most counties and cities have individual bicycle and pedestrian path plans.

Class II: Bicycle lanes on the street which clearly delineate the right-of-way for both the motorist and the cyclist.

Class III: Bicycle routes which require that the motorist and the cyclist share the roadway.

In the planning stage is the Mokelumne Coast to Crest Trail, a public/private partnership project that would allow bikes and pedestrians to cross the state on a dedicated multi-user path. Some segments of the 300 mile trail from Martinez in the Eastern San Francisco Bay Area to Ebbetts Pass in the Sierra Nevada have been constructed and are open to the public, however not all landowners will allow bicycle use across their land, so some parts of the trail are limited to hiking and equestrian use.

The District has developed a District 10 Bicycle Guide that is available on the Caltrans Website located at http://www.dot.ca.gov/dist10/docs/BIKEGUIDE0809.pdf. The plan outlines the different bike plans in jurisdictions throughout the District, identifies the various routes and what to expect while cycling in the District. Most freeways are closed to bicycle travel. Exceptions are made when no alternative to the highway exists. *Figure 17* on the following page is an overview of District 10 bike routes on the State Highway System.

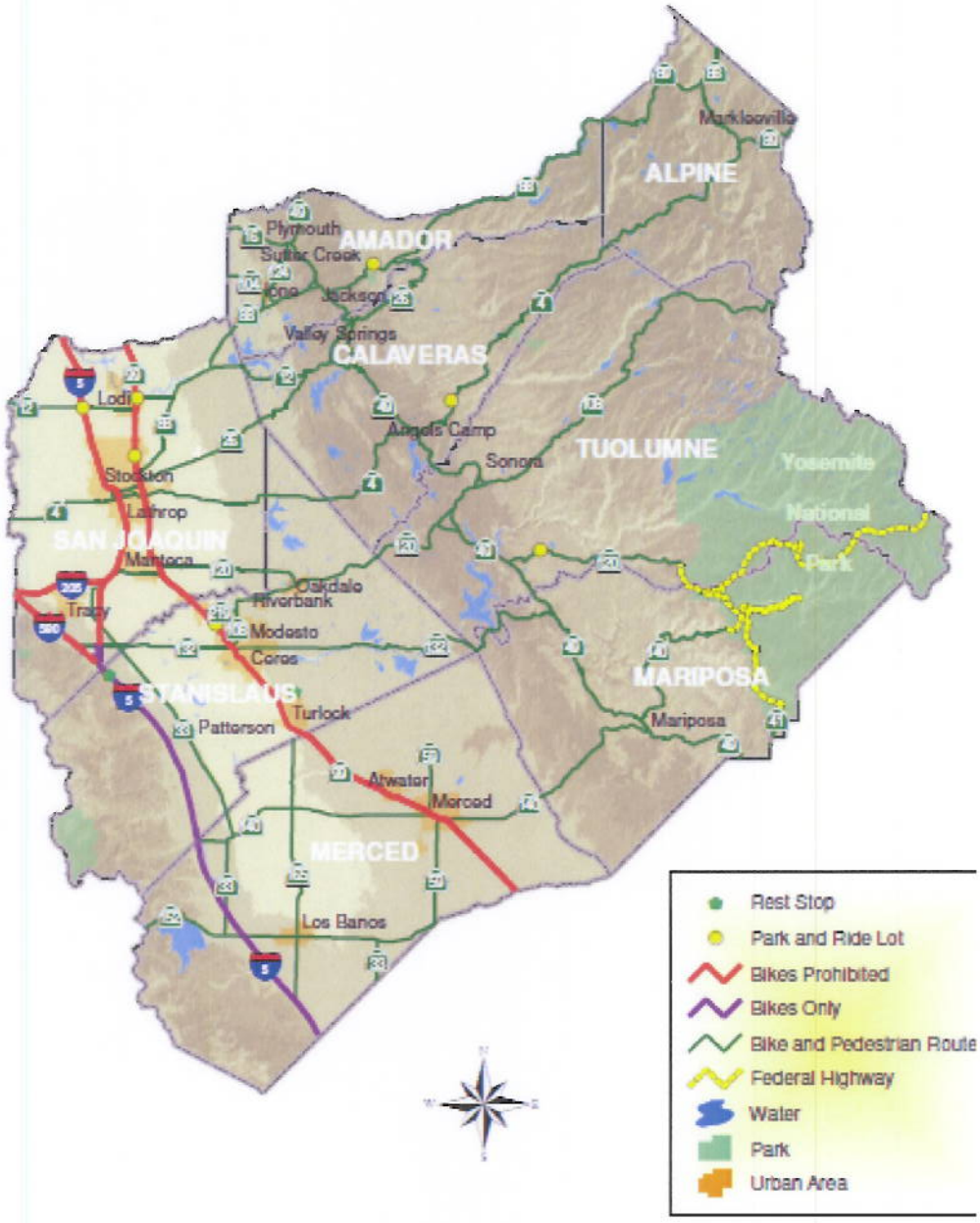


Figure 17: **District 10 Bike Routes**

Rest Areas

Caltrans owns and maintains six freeway rest areas in District 10. Merced County has two for northbound and southbound I-5, located 0.7 miles north of the Fresno County line.

Figure 17: **District 10 Rest Areas**

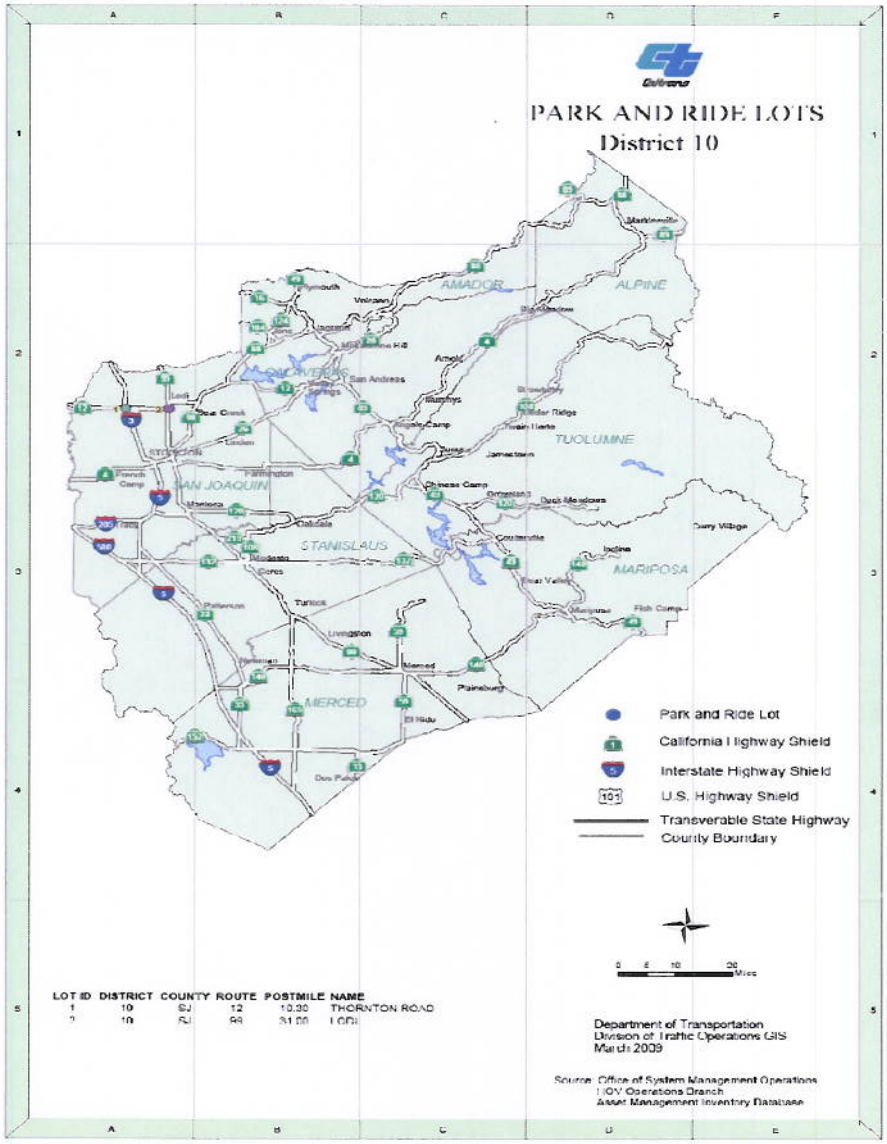
Figure 18: **Rest Area on SR 99 South of Turlock**

Stanislaus County has four rest areas. One pair is for northbound and southbound I-5, located 0.9 miles south of the San Joaquin County line. The second pair is for northbound and southbound SR-99, located 2.3 miles south of the City of Turlock. More information can be obtained about all Caltrans owned and operated rest areas online at:

www.dot.ca.gov/hq/maint/ra/

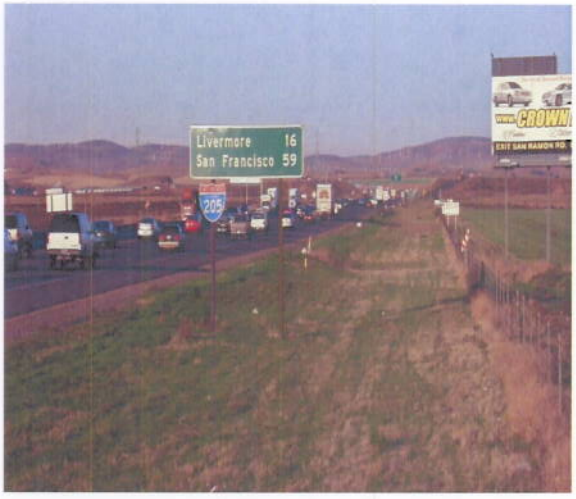
Park and Ride

Park-and-ride lots offer commuters a free location for people to park their cars at no cost. This commute option helps in decreasing traffic congestion and reducing air pollution. These lots offer an excellent opportunity for commuters to link with carpools, vanpools, and transit operators. District 10 has created a District-wide Park and Ride Plan. District 10 currently owns and operates five Park and Ride facilities, another three privately owned Park and Ride facilities operate through a lease agreement. Three other Park and Rides are in the lease agreement process and will soon serve Modesto Area residents.



Section Six KEY CORRIDORS
Major Challenges and Efforts

Interstate 205/Interstate 580 (I-205/I-580)



Interstate 205 and I-580 are critical interregional routes due to their vital economic importance in conveying residents to work and goods to market. The challenge of this commuter and interregional corridor across the Altamont Pass to and from the Bay Area is the high volume of vehicles using this corridor and the projected increase of vehicles and trucks by 2020. Interstate 205 is designated as:

- A Principal Arterial-Interstate included in the Eisenhower Interstate System, National Highway System (NHS).
- Included in the California Freeway and Expressway System.
- National Network for STAA truck route.
- Strategic Highway Network (STRAHNET). The U.S. Department of Defense has identified STRAHNET routes as critical for supporting defense requirements and they are mandatory components of the NHS.
- An Intermodal Corridor of Economic Significance (ICES) as mandated by the AB 1823 (Statutes of 1993). An ICES route is a significant transportation artery in the State that connects or provides access to major sea or waterway ports, nationwide railway systems, airports, and interstate and intrastate highway systems that serve as intermodal corridors of economic significance.
- I-205 is one of nine gateways of major statewide significance (Central Valley to the Bay Area).
- A High Emphasis Route in the interregional road system connecting east-west freeways of national and statewide significance. The IRRS High

Emphasis designation highlights their critical importance to interregional travel and the State as a whole.

Interstate 580 is designated as:

- A Principal Arterial-Interstate included in the Eisenhower Interstate System, NHS.
- Included in the California Freeway and Expressway System.
- National Network for STAA truck route.
- STRAHNET.
- I-580 is also one of nine gateways of major statewide significance (Central Valley to the Bay Area).
- A High Emphasis Route in the interregional road system connecting east-west freeways of national and statewide significance. The IRRS High Emphasis designation highlights their critical importance to interregional travel and the State as a whole.

Major Challenges

Declining LOS - Increased traffic demands created by high population growth in San Joaquin Valley and job opportunities in the Bay Area, new housing and business developments create major trip generators along the corridor, and delay due to truck traffic climbing the Altamont Pass at slower speeds resulting in reduced levels of service.

Right of Way - Right-of-way acquisition required to meet the 10-lane concept facility Ultimate Transportation Corridor (UTC) and a full range of environmental specialty studies will be required for any proposed improvements.

Air quality impacts - non-attainment area.

Promoting increased transit use - benefits of efficient

transit such as BRT will not be possible without HOV dedicated lanes.

Achievements

Tracy Widening Stage II & III - Construction was completed on a section of I-205 from post mile 3.0 to 13.6 to widen roadway and bridges from four to six lanes, resulting in less congestion and decreased travel times to and from the Bay Area.

Programmed and Planned Efforts

CMIA Auxiliary Lane Project - The proposed project along I-205 in the City of Tracy, from PM 1.9 to PM 7.5, consists of auxiliary lanes and extended acceleration and deceleration lanes, from east of Mountain House Parkway to west of MacArthur Drive. The project is funded in fiscal year 10/11 by California Measure 1B CMIA funds and San Joaquin County Measure K transportation sales tax funds.

State Route 99 (SR-99)

As the principal north/south freeway in the Central Valley, SR-99 is also a major connector to all east/west routes that link to the San Francisco Bay Area, the Central Coast, and the Sierra Nevada Mountains. State Route 99 provides for movement of goods for the entire Central Valley particularly for the shipment of agricultural products to both domestic and international markets. Agriculture, while the Valley's most significant economic activity, is also a major component in the larger California economy. Department of Finance statistics show over 50 percent of California's agricultural output originated in SR-99 corridor counties. The importance of SR-99 to the movement of people, goods, and services is shown by its designation as:

- A State High Emphasis Focus Route on the Interregional Road System.
- A "Priority Global Gateway" for goods movement in the Global Gateways Development Program (January 2002).
- A highway on the National Highway System as part of the STRAHNET, under the Federal-aid Surface Transportation Program.
- A part of the National Network of the STAA for large trucks.
- A Principal Arterial.
- An ICES. SR-99 has been deemed by the State to be critical to statewide movement of freight.

Major Challenges

Aging Facility - State Route 99 at 50 years old is essentially an "antique." Segments of SR-99 range from 40 to 50 years old in Lodi, Stockton, and Merced. It ranges from 35-40 years old in South Lodi to North Stockton, from Central Modesto to Ceres, and Atwater to Merced.

Right of Way - The minimum facility standard, or route concept, for SR-99 as a key interregional trunk route is a full freeway of 4 to 8 lanes between San Joaquin County and Merced County. The need for 10 lanes has been identified through Stockton, but due to right of way restrictions, the concept will remain 8 lanes. HOV lanes are part of the concept for the most highly urbanized areas in the SR-99 Corridor.

Achievements

SR-99 Atwater Freeway Project - Completion of a $70.2 million project that expanded two miles of SR-99 in Atwater from a four-lane expressway to a six-lane freeway. The project has received Proposition 1B SR-99 Bond Act Funds. The two-mile section of SR-99 that was widened has an average daily traffic count of approximately 40,000 vehicles. With the completion of this project, there are now five miles of six-lane freeway between Livingston and Atwater, which will help reduce traffic congestion and enhance the movement of goods. The project also built a new interchange at Westside Boulevard.

SR-99 Widening and Hammer Lane Reconstruction - Construction has been completed that converts SR-99 into a six-lane freeway facility from SR-4 (Crosstown Freeway) to Hammer Lane and reconstructs an interchange at SR-99 and Hammer Lane in Stockton. Also recently completed is the Manteca 99/120 E Widening to reconstruct the SR-99/SR-120 East Separation and Yosemite Avenue interchange in Manteca, and the Arch Road project to construct a single point urban interchange (SPUI) at SR-99 and Arch Road in Stockton (the 1st SPUI in the Valley, 3rd in the nation).

Programmed and Planned Projects

San Joaquin County

Through the eastern fringe of Stockton, 6.8 miles of SR-99 are currently congested for 3.25 hours in both a.m. and p.m. peak periods. In 10 years, 23.0 miles of the route in Manteca through Stockton will be congested. The entire 38.7 miles in San Joaquin County are projected to be congested in the 20 year horizon. The South Stockton 6-Lane Project is planned to add capacity from North of the Arch Road Interchange to just south of the SR-4 West connector and will begin construction in 2012. The Manteca 6-Lane Project to widen from four to six lanes south of Arch Road to the SR-120 interchange in Manteca is anticipated to also begin construction in 2012. Both projects have received Proposition 1B SR-99 Bond Act funds.

Stanislaus County

Of the 25 miles of SR-99 in Stanislaus County, 5.5 miles through the Turlock area are congested and 4.5 miles through the Modesto urban area. New housing and business developments create major trip generators along the corridor. There are no programmed capacity improvements for SR-99 in the County at this time. An interchange project is currently programmed to modify the Pelandale Interchange and construction is continuing on the SR-99/Whitmore Avenue Interchange. Planned improvements include converting the existing six-lane freeway facility through the Modesto urbanized area to an eight-lane freeway. Based on the San Joaquin Valley Ramp Meter and HOV plan, the eight lane project will be constructed as one HOV lane in each direction plus operational improvements. Planned operational improvements include auxiliary lanes, ramp metering, closed-circuit TV cameras and CMS throughout the County, weather stations, TMS and traffic monitoring stations at various locations.

Merced County

Of the 37.30 miles of SR 99 in Merced County, 22.9 miles through the Atwater/Merced urban area are projected to be congested within the next 20 years.

Programmed improvements through Merced will upgrade existing expressway portions on SR-99 to freeway standards, and add approximately 10 miles of six-lane freeway south of Merced to the Madera/Merced County Line (Plainsburg Road Freeway, Arboleda Drive Freeway). Both projects have received Proposition 1B SR-99 Bond Act funds.

Gap Closure - Closure of all expressway segments in Merced County (upgrading to freeway standards), lane additions, interchange modifications, and other

operational improvements such as auxiliary lanes is a key component of the interregional improvement strategy for the route.

Operational improvements to be implemented countywide include closed circuit TV cameras, CMS and traffic monitoring systems. Planned improvements will upgrade the entire SR-99 facility into a six-lane freeway, and modify interchanges SR-59/SR-99 and SR-99/SR-140 (SR-140 provides access to Yosemite).

Other Efforts

State Route 99 Master Plan - Caltrans District 6 and 10, and local communities have worked together to develop a master plan to improve the SR-99 corridor through both districts. It is hoped the SR-99 Corridor Master Plan will strengthen community identity, unify freeway improvements, and develop design concepts that tie communities through the San Joaquin Valley together and foster a valley-wide identity. In addition to dealing with aesthetic concerns, the plan addresses the capacity needs as increased regional and interregional traffic puts more stress on the corridor.

State Route 99 Corridor Business Plan - The SR-99 Business Plan identifies Caltrans' long-term goals and develops a list of prioritized projects to achieve those goals in order to guide decision makers as they address the needs of the developing corridor. The plan focuses on STIP projects costing more than $8 million and groups the projects into four priority categories:

1. **Freeway Conversion** - Category is included for informational purposes only, as all non-freeway sections have been or will be eliminated in five years.

2. **Capacity-Increasing** - Widen SR 99 to minimum of six lanes (eight in some urban areas, if feasible).

3. **Major Operational Improvements** - Improve outdated interchanges and construct auxiliary lanes in urban areas.

4. **New Interchanges** - Construct interchanges at new locations to accommodate growth and development.

State Route 152 (SR-152)

State Route 152 begins at its junction with SR-1 in Watsonville in Santa Cruz County and ends at its junction with SR-99 in Madera County. It becomes a major east-west interregional route starting at US-101 connecting the southern San Francisco Bay Area with I-5 and SR-99 in the San Joaquin Valley. In District 10, SR-152 passes through Merced County and the City of Los Banos. SR-152

provides the only direct agricultural, goods movement, and recreational route to the south Bay Area and the coast from the Central Valley. SR-152 is:

- A State High Emphasis Focus Route on the Interregional Road System.
- A "Priority Global Gateway" for goods movement in the Global Gateways Development Program (January 2002).
- A highway on the National Highway System.
- A Terminal Access Route of the STAA for large trucks.
- A Principal Arterial.
- A "main street" for the City of Los Banos.

Major Challenges

Gap Closure - The minimum facility standard for SR-152 between US-101 and SR-99 is a 4-lane divided expressway. However, the highway is a 4-lane conventional highway for 4.67 miles through the City of Los Banos. This can cause significant delays to interregional traffic.

Main Street - The conventional highway segment of SR-152 acts as a main street through the City of Los Banos. The highway brings a great deal of interregional traffic through the middle of the city, disrupting the movement of local traffic and pedestrians across the facility. This creates context sensitivity challenges within the community.

Achievements

Los Banos Access Management Plan – The plan was a cooperative effort between Caltrans, Merced County Association of Governments, and the City of Los Banos to address access challenges related to SR-152 and SR-165 in the City of Los Banos. The plan identified various access management and land use decisions to reduce the highway delay time through Los Banos.

Programmed and Planned Projects

Los Banos Bypass – Proposes to reroute the conventional highway segment around, instead of through the City of Los Banos. The bypass facility will

ultimately be a four -lane freeway on a new alignment. The first segment of the bypass will construct a four-lane freeway between SR-165 and an existing signalized intersection on SR-152 east of town. The second segment will connect SR-152 near Volta Road to SR-165 and the third segment will construct three interchanges along the freeway.

State Route 219 (SR-219)

State Route 219 (Kiernan Ave.) is an east/west route beginning at its junction with SR-99 in Salida and ending at SR-108 (McHenry Ave.) just north of the City of Modesto. The entire route is about 4.8 miles and is completely within Stanislaus County. The route is currently a 2- lane conventional highway. It serves the community of Salida and the City of Modesto. Also, traffic on SR-99 bound for the City of Riverbank via SR- 108 is directed to SR-219 and is used heavily by both trucks and local commuters.

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- SR-219 is functionally classified as a Principal Arterial from PM 0.08-0.24.
- PM 0.24-4.86 is functionally classified as a Minor Arterial.
- SR-219 is a Terminal Access route in its entirety for the National Network for STAA Trucks.
- The route is not on the IRRS.

Major Challenges

Congestion/Delay - SR-219 serves as connector between SR-99 to the west and SR-108/McHenry Avenue to the east, increasing its regional significance. A high volume of vehicular and truck traffic generated from the nearby residential industrial, commercial, and agricultural businesses combined with through traffic results in traffic congestion and operation concerns during peak traffic periods. The current 2005 ADT of 19,500 is forecasted to increase to 40,500 ADT by the year 2035.

Achievements

State Route 219 4-Lane Widening Phase I and 219/ Dale Road Intersection Improvements - Widening and resurfacing of the facility from 2 to 4 lanes to Dale Road and intersection improvements at Dale Road have been completed.

Programmed and Planned Projects

State Route 219 4-Lane Widening Phase II - Continuation of improvements on SR-219 from Morrow Road to SR-108.

State Route 108 (SR-108)

State Route-108 is primarily an east/west route serving Stanislaus, Tuolumne, and Mono Counties. The highway starts at SR-99 in Modesto and overlays SR-132 until SR-108 turns north on McHenry Avenue. SR-108 joins SR-120 in Oakdale for 26 miles until SR-120 diverges at the Yosemite junction and heads southeast toward Yosemite National Park. The route continues through Tuolumne County passing through the City of Sonora and finally ending at US-395 in Mono County in the Eastern Sierra. The characteristics of SR-108 can be described as follows:

- This route is on the Interregional Road System in Tuolumne County, but not in Stanislaus County.
- SR-108 is a Terminal Access Route for the STAA for almost all of Stanislaus County and below Strawberry in Tuolumne County.
- This route on the National Highway System as part of the Strategic Highway corridor Network, under the Federal-aid Surface Transportation Program.
- SR-108 is a Minor Arterial for most of its length. The highway is classified as a Principal Arterial in the Cities of Modesto, Riverbank, and Oakdale.
- While not officially designated as such, SR-108 is eligible for designation as a Scenic Highway from the junction of SR-49 east to the Mono County Line.

Major Challenges

Highway as Main Street - SR-108 acts as a main street in several communities in District 10. In Tuolumne County, communities include East Sonora, Confidence, Mi-Wuk Village and Sugar Pine. In Stanislaus County the highway is a main street in the Cities of Modesto, Oakdale and Riverbank.

McHenry Avenue in Modesto -The constructed portion of SR-108 begins in downtown Modesto. The highway is aligned with portions of K, L, and Needham Streets in downtown before becoming McHenry Avenue, a main commercial strip in the city. There are many intersections and commercial driveways lining both

sides of SR-108 creating, as many as forty-five access points per mile, per side of the highway. In the approximately 5.18 mile stretch of this segment of SR-108, there are sixty-two intersections with local streets and highways, twenty-eight of which are signalized. A study is planned to analyze the feasibility of relinquishment of this stretch of SR-108.

Access Control - Access on the existing facility will need to be managed in an effort to maximize operation and safety, especially within the vicinity of the cities of Modesto, Oakdale, Riverbank, Jamestown, and Sonora.

Achievements

Riverbank SR-108 Enhancement Plan - This plan was developed to address "Main Street" challenges in the City of Riverbank. The goal the plan was to create a more walkable and livable community. Recommendation from the plan included a bypass of SR-108 for interregional and pass-through traffic, traffic calming measures such as roundabouts, and creating village concepts within the City.

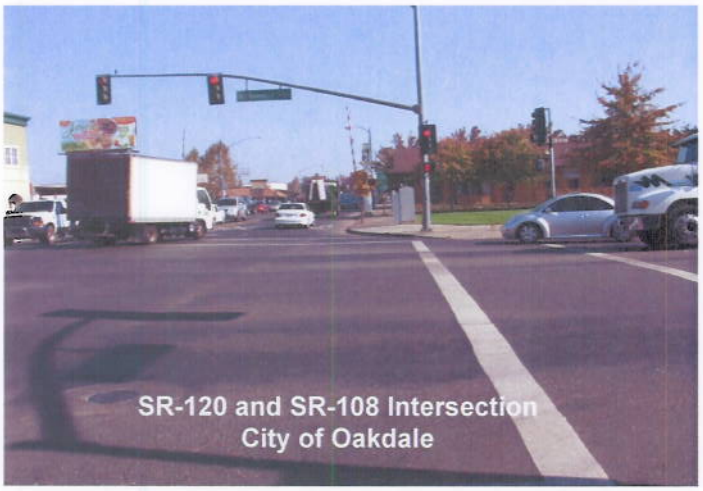
Trans-Sierra Route - State Route 108 is an important Trans-Sierra Route linking the San Joaquin Valley with the Eastern Sierras. The highway crosses the Sierra Nevada Range through Sonora Pass at an elevation of 9,624 feet, the second highest trans-Sierra passage after Tioga Pass on SR-120. This highway is subject to winter closures each year.

East Sonora Bypass Stage II - The East Sonora Bypass project has been split up into three separate projects. This project will be built as a continuation of the completed East Sonora Bypass Stage I and will construct a 2-lane access controlled expressway on a new alignment from Peaceful Oak Road to Via Este. The project is scheduled to begin construction in April 2010. The project will ease congestion, decrease commute times, and enhance safety for interregional and regional trips within and through the county. The project will also bypass operational problems on the current highway alignment. Stage III of the East Sonora Bypass is planned to be built

Programmed and Planned Projects

East Sonora Bypass Stage III - The East Sonora Bypass Stage III is still in the planning stages. The bypass will be a continuation of Stage II from Via Este to North Sunshine Road, completing all three stages of the bypass project. Initially classified as a 2-lane expressway on a separate alignment, there will be no at-grade intersections, but rather freeway type interchanges. Right of way has been set aside to allow for the conversion of the facility into a 4-lane freeway.

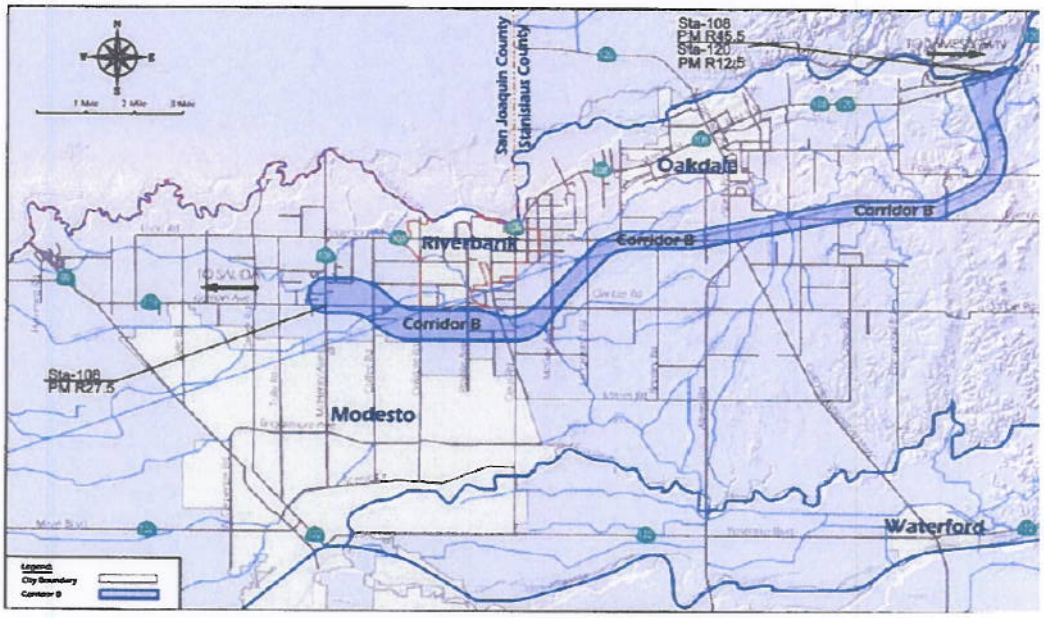
North County Corridor - In Stanislaus County a new route is being developed which will replace a portion of SR-108. The primary intent of the project is to provide a high-capacity, west-east roadway to accommodate anticipated traffic growth in northern Stanislaus County to alleviate traffic on parallel roadways for example to alleviate congestion in the intersection of SR-120 and SR-108 in the City of Oakdale, to accommodate multi-modal travel to provide interregional connectivity, and to provide for economic growth.



To plan for the new route, the North County Corridor Transportation Expressway Authority (NCCTEA) was formed. The NCCTEA consists of Caltrans, Stanislaus Council of Governments (StanCOG); the cities of Oakdale, Riverbank, Modesto; and the County of Stanislaus.

The ultimate facility type would be a freeway/expressway with interchanges, at-grade intersections, grade-separated major railroad crossings, irrigation district crossings, frontage roads and street alignments. The recommended alternative is Corridor B. The Project Report was completed by Caltrans in January, 2010.

***Figure 20*: North County Corridor – Corridor B Alternative**



State Route 4 (SR-4)

A portion of the SR-4 Corridor crosses through approximately 65 miles of Calaveras County, and the communities of Copperopolis, Angels Camp (also known as the City of Angels), Douglas Flat, Avery and Arnold. This corridor is primarily impacted from increasing numbers of local residents commuting between Calaveras County and Stockton, and is also a route to numerous Mother Lode recreation and tourist areas such as New Melones Lake, Big Trees State Park, Bear Valley in Alpine County, historic gold rush towns and wineries. SR-4 is also an important route for lumber and ranching industries, and is a lifeline route for goods and services needed by many of the communities along the corridor.

Currently, the number of drivers traveling the portion of SR-4 at its junction with SR-49, and west of the City of Angels has an ADT of 3,550 and is projected to increase to 8,955 by year 2020. At the junction of SR-49 and SR-4 on the west side of the City of Angels, and through the City of Angels to the east side of the City, the existing ADT is 5,500 and is projected to be at 9,563 by year 2020. The ADT continues to increase moving from the east side of the City of Angels at the junction of SR-49 and SR-4, to W. Moran Road near the town of Murphys, with an existing ADT of 6,126, and projected to be at 13,000 by year 2020.

The Calaveras Council of Governments is nearing completion of the development of a Corridor Management Plan to identify corridors where additional arterials and collectors are needed to improve the performance and safety of the local system, which in turn, will assist in reducing congestion on SR-4. Due to the highly the scenic and historic qualities of the area, widening would have a significant impact upon communities. Left turn lanes, passing lanes and turnouts are low-cost alternatives that can be used to achieve operational improvements rather than lane widening. The North Angels Bypass was initiated as an improvement strategy for recurrent and prolonged congestion from the junction of SR-4 and SR-49 on the north side of the City of Angels Camp, to the junction of SR-4 and SR-49 on the south side of the city.

- SR-4 is classified as a Minor Arterial for all of the segments in Calaveras and Alpine County.
- It is regionally significant and is part of the IRRS.

- Part of the National Truck Network (NTN).
- Officially designated as a State and a Federal scenic highway/byway and is known as the Ebbetts Pass National Scenic Byway from east of Arnold to SR-89 in Alpine County.

Major Challenges

Congestion - Increasing local population and tourists creating congestion. Calaveras County population is projected to grow at a modest 1 to 2 percent.

Right-of-Way - acquisition may be required to meet the 4-lane concept facility UTC along portions of SR-4.

Access Control - Access on the existing facility will need to be managed in an effort to maximize operation and safety, especially within the vicinity of the cities of Angels Camp, Murphy's, and Arnold, Avery and Dorrington.

Context Sensitivity & Environmental Issues - Full range of environmental specialty studies will be required for any proposed improvements. Projects should be planned so as to have minimum impact to this scenic corridor.

Air quality - Non-attainment challenges.

Achievements

The Angels Camp Expressway project was completed, routing SR 4 traffic around the historic "main street" of the City of Angels. The 2-lane access controlled expressway on a new alignment from the north junction of SR-4 and SR-49 to a point of SR-4 approximately 0.6 miles east of Rolleri Bypass Road will help relieve congestion through the old town and expedite travel for motorists traveling to destinations east of the City of Angels.

Programmed and Planned Projects

State Route 4 Wagon Trail - The Wagon Trail Project will be constructed in phases as funding becomes available. The existing alignment between O'Byrnes Ferry Road and SR-49 has limited capacity to accommodate large trucks, buses and the projected growth of traffic along this corridor. Traffic volumes are projected to increase by 14,000 ADT from 2002 to 2025 on this segment of SR-4 and as a result, will operate at LOS E by 2025. This improvement project will provide a faster and safer alignment for a five mile portion of SR-4 between Copperopolis and Angels Camp.

Section Seven TRANSPORTATION SYSTEM IMPROVEMENT NEEDS

Caltrans, among its many roles, has primary responsibility for the planning, construction, maintenance, and operation of the State Highway System. Although the DSMP shows connections with non-highway modes and acknowledges larger transportation and land use initiatives, this Plan provides direction regarding how Caltrans will implement its responsibilities as owner and operator of the State Highway System that is challenged by the need to improve safety, ensure personal mobility, maintain aging facilities and address increasing congestion. Other transportation service providers have similar documents that provide guidance in how they deliver their service.

Much of our highway system was built many years ago and is reaching its expected useful life. Large-scale and expensive reconstruction and rehabilitation projects have been necessary just to keep existing facilities operational. Similar projects will be needed in years to come as deteriorated pavement must be replacement and bridges require major overhauls. These projects, though expensive and necessary, do not address the demands placed on transportation facilities by an expanding population and increased demand for interregional travel through the region.

The highway system has been built to a point where, rather than building whole new highways or expanding existing facilities, emphasis on state of the art system and demand management strategies to maximize system productivity is necessary. In addition, sound local land use decisions would greatly reduce the need for new highway facilities. Finally, a robust investment in the development and continued operation of alternative modes to the single occupant vehicle, including transit, bike facilities, and pedestrian facilities must be made.

San Joaquin County is a major northern California distribution point where the two primary north-south highways, I-5 and SR-99, are joined by the Stockton SR-4 Crosstown Freeway, SR-120 through the City of Manteca, and I-205 in Tracy, a major interregional connector between the northern San Joaquin Valley and the San Francisco Bay Area. Stockton's deep-water port and airport provide international transport links, in addition to being in close proximity to Bay Area air and shipping distribution ports. This location advantage, coupled with shipping/receiving facilities such as the Union Pacific Intermodal Facility, the Stockton Deep Water Port, the Stockton Airport, and the transportation infrastructure has made San Joaquin County an attractive location for warehouses and distribution centers. The Caltrans 2001 Global Gateways Development Program (GGDP) Report identified the highways I-5, I-205, and

SR-120 (from I-5 to SR-99) among the top priority global gateways within California.

The San Joaquin Valley Goods Movement Study, prepared for Caltrans and the eight San Joaquin Valley counties of (Kern, Fresno, Tulare, Kings, Madera, Merced, Stanislaus and San Joaquin) determined that trucking is the dominant mode for moving freight. The increase in freight movement by trucks on State highways is growing faster than can be accommodated by the existing capacity.

With consideration of our mobility challenges, responsibilities, and partnerships, the DSMP focuses on three areas of improvements to the State Highway System:

- System maintenance.
- System completion.
- Congestion relief.

System Maintenance

Maintaining the existing State Highway System is of paramount importance. The existing infrastructure was created through investment over many decades and there is an obligation to protect an investment so vital to the economy and quality of life.

The District 10 2009 10-Year SHOPP Plan summarizes the District's maintenance and system operations needs for the next 10 years, including the necessity to address the growing inventory of distressed lane miles in the District. Unfortunately, due to shortfalls in State and federal funding, it is expected that the number of lane miles of highway with distressed pavement will increase significantly in the coming years. Therefore, it will likely be necessary for Caltrans to focus its limited pavement maintenance resources on the most critical needs, allowing some highways to have pavement of poorer quality than what travelers have been accustomed to in years past. Still, many of our most heavily traveled routes have or will have reconstructed or rehabilitated pavement making for better travel conditions on key routes.

The SHOPP identifies over $493 billion in needs for the District over a 10-year time period. The current costs by SHOPP program element are indicated in Table 7.1. Even this seemingly high level of investment will not be sufficient to meet all of the system maintenance needs and there is no assurance that the District will receive all of the funding that has been identified in the 10-year SHOPP.

Table 7.1 **2009 District 10 Ten-Year SHOPP Program**

PROGRAM	TOTAL COST ($1,000)
EMERGENCY RESPONSE	**$10,260**
Roadway Protective Betterment	10,260
COLLISION REDUCTION	**96,379**
Safety Improvements	82,744
Collision Severity Reduction	13,635
MANDATES	**20,565**
Relinquishments	4
Storm Water	15,390
ADA Curb Ramp	5,171
MOBILITY	**11,479**
Transportation Management Systems	9,454
Weigh Stations & WIM Facilities	2,025
DISTRICT MINORS	**62,974**
BRIDGE PRESERVATION	**182,266**
Bridge Rehabilitation	65,847
Bridge Scour Mitigation	8,100
Bridge Rail Replacement/Upgrade	47,569
Bridge Seismic Restoration	49,950
Preventive Maintenance	10,800
ROADWAY PRESERVATION	**90,354**
Roadway Rehabilitation (3R)	59,223
Pavement Preservation (CAPM)	27,810
Drainage System Restoration	3,321
ROADSIDE PRESERVATION	**19,170**
Highway Planting Rehabilitation	2,970
Roadside Safety Improvements	2,700
Safety Roadside Rest Area Rehabilitation	13,500
TOTAL SHOPP PROGRAM	**$493,447**

System Completion

In 1990, the State developed the IRRS which highlighted highways that were defined as "High Emphasis" and "Focus" routes. The High Emphasis and Focus Routes target the mobility objective of completing a trunk or core highway system that connects urbanized areas with expressways or freeways. Such facilities are typically a minimum of two lanes in each direction and have controlled access that eliminates driveways, minor road intersections and similar access points that

disrupts the flow of traffic. The intent is to link the State's urbanized areas with relatively high capacity, high speed, and high quality highways.

State Route 120 east of SR-99 is the only High Emphasis or Focus route in District 10 where improvements are still needed to bring the route to at least a four lane highway standard. No projects are currently programmed. *Table 7.2* lists planned projects that are currently inactive or have no identified funding.

Table 7.2 **System Completion Projects**

County	Rte	Project	Programmed Funding ($1,000)	Additional Needed Funding ($1,000)	Estimated Total Project Costs ($1,000)
SJ	120	Expressway on new alignment	Inactive		22,000
SJ	120	Widen to 5-lane Jack Tone Rd to McHenry		75,000	75,000
SJ	120	Widen to 5-lane McHenry to County line		25,000	25,000
TUO	120	Keystone 4-lane Expressway		17,000	17,000
TUO	120	2-4-lane Expressway Wards Ferry Rd to Ferretti Rd		17,000	17,000

Congestion Relief

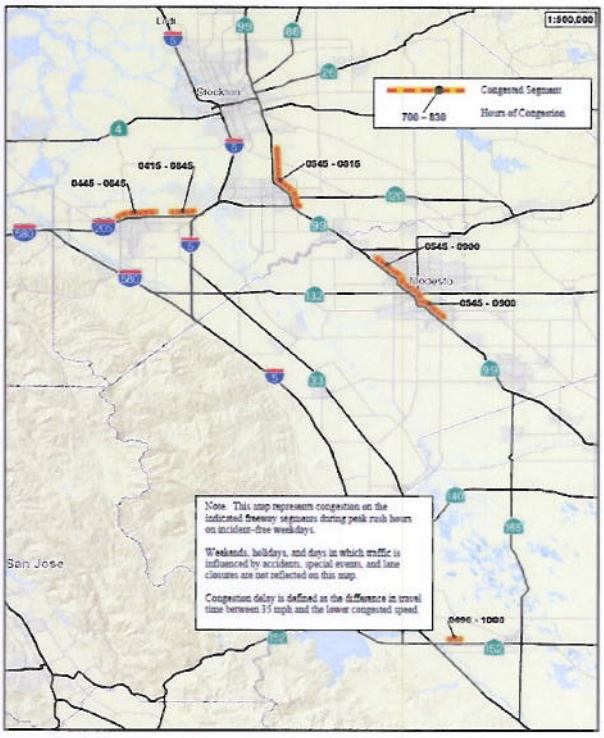
The stalled economy and high gas prices have had one seemingly positive outcome, creating a temporary lull in the steady increase in traffic congestion statewide. According to the 2008 Highway Congestion Monitoring Program (HICOMP) report, since the 2007 data compilation, California urban freeway recurrent congestion statewide decreased 28 percent, from 581,674 daily vehicle hours of delay (DVHD) to 416,075 DVHD. The congested directional miles (CDM) of urban-area freeways decreased 16 percent over the same period, from 2,148 in 2007 to 1,804 in 2008.

District 10 was the only district with increased CDM, gaining 8 percent from 43 miles in 2007 to 46 miles in 2008. This was due to construction on the Interstate 205 corridor. DVHD declined 38 percent from 3,444 in 2007 to 2,120 hours in 2008. District 10 completed one project that contributed to the reduction of congestion in the urban corridors. State Route 99 between SR-4 and Hammer Lane through the center of Stockton was widened and an interchange at Hammer Lane was reconstructed, improving the flow of traffic along this key corridor.

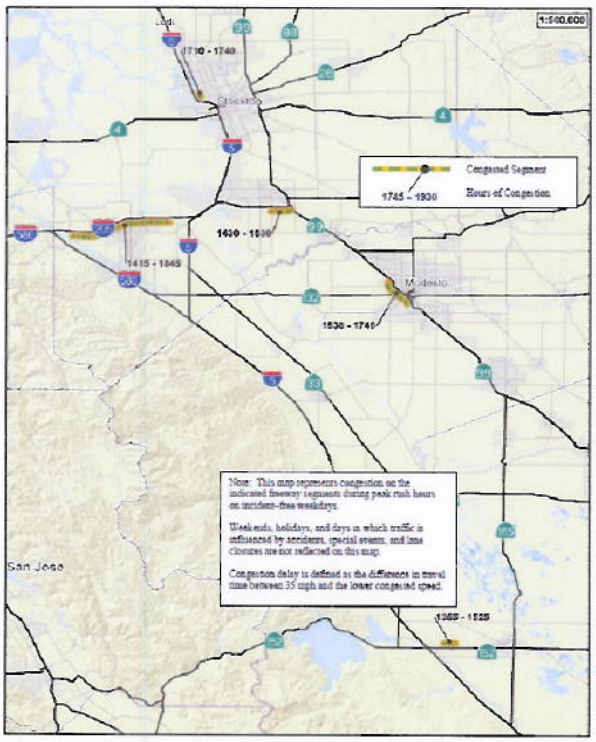
Prior to the current recession, traffic congestion throughout the District 10 area was rapidly increasing in tandem with regional growth, reaching unacceptable levels in some areas. Fortunately, the economy will recover, but unfortunately, traffic congestion will resume its increase.

Caltrans accepts that traffic congestion is a normal part of urban, and at times, rural travel, and is often a reflection of a vibrant local economy. It is not practical, desirable or possible to build sufficient highway capacity to eliminate traffic congestion. But congestion does need to be managed and minimized so that it is not a drag on the economy, waste an inordinate amount of time

DISTRICT 10
STOCKTON AREA
2008 MORNING CONGESTION MAP



DISTRICT 10
STOCKTON AREA
2008 EVENING CONGESTION MAP



for the traveler, and does not generate increased emissions of air pollutants. Severe traffic congestion is a waste of time and money.

District 10 is focusing its highway congestion relief efforts on making targeted operational improvements at traffic bottlenecks and at other problem locations by constructing freeway auxiliary lanes, installing ramp meter infrastructure, extending merge areas, implementing adaptive traffic signal systems and implementing overall corridor system management strategies that are tailored for each major freeway corridor and some rural highway corridors. The District is also working in partnership with local and regional

agencies to implement ramp metering and HOV lanes in priority urban areas.

Caltrans encourages cities, counties and transit operators to provide local road, transit, bicycle and pedestrian facilities that support local trip making so that highways are used for longer distance travel and can operate more efficiently by not having excess local, short distance trips. Caltrans supports such efforts by accepting local projects as mitigation for development project impacts to highways where trip diversion can be shown, provides funding for transit capital expansions, and advocates for key parallel capacity projects. Our CSMP's are partnership-oriented and strive to coordinate management of a multi-modal system, not just the highway system.

A select set of projects have been identified as Priority Congestion Relief Projects, based on their location on the heaviest traveled corridors, that provide the greatest reduction in vehicle minutes of delay, vehicle miles of delay and air pollutant emissions. A complete list of all the planned, programmed and needed projects can be found in the draft District 10 TSDP.

Future Facility Improvement Needs

During the next 20 years, population in District 10 is projected to increase by 64 percent from 1.74 million people to 2.72 million people based on data from the California Department of Finance. If current land use patterns are perpetuated, the region's transportation system will be inadequate to meet the traffic and congestion increases associated with this type of growth. Substantial highway expansions would be necessary to maintain a reasonable level of mobility. Highest priority projects to maintain mobility for the District are:

- SR-99, 4 to 6 lanes, Lodi to the Sacramento County line.
- SR-99, 4 to 6 lanes, gaps in Merced.
- SR-99, 8 lanes through Modesto.
- I-5 & SR-99, 8 lanes through Stockton.
- I-205, 8 lanes.
- SR-120, 6 lanes on Manteca Bypass.
- SR-152, Los Banos Bypass.
- SR-132 West, 4 lane realigned facility.

- SR-108, East Sonora Bypass Phase II.
- SR-4, Wagon Trail Realignment.
- SR-88, Pine Grove Improvements.

Regional and local agencies focusing on *Blueprint* planning concepts that direct growth to existing urbanized areas, emphasize compact development and provide for more balanced jobs/housing will provide some help in reducing highway demand, as will recent legislation such as SB 375 and AB 32 that target greenhouse gas reductions and changes to development patterns. Caltrans also implements additional *Strategic Growth Plan* concepts by supporting ITS, traffic management and operational improvements to maintain mobility in preference to capacity increasing improvements to maintain minimal operational standards.

Funding these improvements to State facilities and to other vital components of the transportation system such as transit, passenger rail, local roads, and bike/pedestrian paths will require innovation and contributions from all potential sources. Local development projects will need to help, and local agencies will need to consider expanding transportation sales taxes, explore the possibility of public/private partnerships, and broaden mitigation fee and regional transportation funding programs. Innovative funding mechanisms such as high occupancy toll lanes are being studied for select facilities. The region as a whole needs to continue to be effective in competing for State and Federal discretionary funds. Cooperation among partner agencies and stakeholders is vital to ensuring continued mobility in the District 10 region.

Appendix A
Bibliography & References

Assembly Bill 857, Chapter 1016, Wiggins, Sept. 2002

California Transportation Plan 2025 (2003), California Department of Transportation

California Transportation Journal, April-June 2003, Volume 3, Challenge 4

Central Stanislaus Freight Study, August 2001, Stanislaus Council of Governments

District 3 District System Management Plan, (Draft), December 2001

District 5 District System Management Plan, [date]

District 10 Business Plan

Economic Forecast for California's Central Valley, 2001, Great Valley Center Global Gateways Development Program Stakeholder Perspectives on Options to

Facilitate the Movement of Goods in California, January 2002, as requested by Resolution Chapter 158, Statutes of 2000 (SCR 96, Karnette), CA BT&HA, CADOT, Division of Transportation Planning, Office of Goods Movement

Intelligent Transportation Systems Deployment Plan Strategic Evaluation Final Report, June 28, 2002, CADOT, Division of New Technology and Research

I-205/I-5 Corridor System Management Plan (CSMP) 2010 CADOT, District 10, Office of System Planning

Main Streets: Flexibility in Design and Operations, California Department of Transportation, [dates] July 2002

Port of Stockton 1997-1998 Annual Report

PPIC Statewide Survey April 2002, Great Valley Center

San Joaquin Valley Goods Movement Study, September 2000, Council of Fresno County Governments

Statewide Goods Movement ITS Action Plan, California Department of Transportation Division of New Technology and Research, May 2002

Transportation and Mobility in Southern California, Automobile Club of Southern California

California State Statutes 2004

Reference System Planning Documents

District 10 Transportation Concept Reports (TCR)

District 10 Transportation System Development Program (TSDP)

District 10, District System Management Plan (DSMP)

Intermodal Transportation Management System (ITMS)

Interregional Transportation Strategic Plan (ITSP)

High-Occupancy Vehicle (HOV) Plan

Ramp Metering Development Plan (RMDP)

Park and Ride Plan (P&R) 2003

Regional Transportation Plans (RTP) for San Joaquin County , Stanislaus County, Merced County, Amador County, Alpine County, Calaveras County, Tuolumne County, Mariposa County.

Reference Policy Documents

California Transportation Plan 2025 (CTP)

GoCalifornia Initiative

Governor Arnold Schwarzenegger's Strategic Growth Plan (SGP)

Appendix B
Glossary of Terms and Acronyms

Terms

Accessibility: The opportunity for and ease of reaching activity sites. The fundamental product and intended purpose of the transportation system is the provision of the opportunity of people and goods to physically reach or access desired locations.

Air Basin: An area or territory that contains similar meteorological and geographical conditions. In California, the Air Resources Board (ARB) has established nine air basins.

Attainment area: An area that meets air quality standards.

Capacity enhancement: New facilities projects and operational improvement which add through lanes.

Concept: A strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.

Focus Routes: These routes are a subset of 34 High Emphasis routes. They represent 10 Interregional Road System (IRRS) corridors that should be of the highest priority for completion to minimum facility standards in the 20-year period.

Goods Movement: The general term referring to the flow of commodities and modal goods.

High Occupancy Vehicle Lane (HOV Lane): A system of exclusive lanes signed and striped for use by vehicles with multiple occupants (two, three, or more persons). HOV lanes are designed on roadways to reduce traffic congestion, improve safety, reduce fuel consumption, and improve air quality.

Intermodal: The ability to connect, and make connections between modes of transportation.

Level of Service (LOS): The qualitative operating level of an intersection or roadway segment based upon delay and maneuverability from free-flow to gridlock (see Appendix C).

Mitigation: Measures taken to minimize adverse environmental impacts. Mitigation could reduce the magnitude and extent of an impact from a level of significance to a level of insignificance.

Mobility: Mobility refers to the potential for movement or the ability to travel from point A to point B, and implies both a means (vehicle) and a way (route, path, or line). As mobility is increased, as more destinations can be reached or more means and ways are available, access tends to be improved. As mobility is decreased, as it becomes more difficult or expensive to travel, access tends to become increasingly restricted.

Multi-Modal: The availability of transportation options using different modes within a system or corridor.

Non-attainment area: An area that does not meet air quality standards.

Outcome: A consequence or condition resulting from the construction, operation or use of the transportation system. Desired outcomes are used to describe desired consequences, conditions or benefits. For example: a desired outcome of the operation of a bridge could be to provide access between two counties. An undesired outcome of the construction of the bridge might be the destruction of wetlands.

Ramp Metering: A traffic management strategy which utilizes a system of traffic signals on freeway entrance and connector ramps to regulate the volume of traffic entering a freeway corridor.

Right-of-way: Land, property, or interest therein, acquired for infrastructure such as a highway, rail bed, pipeline, electric power lines, or telephone facilities. The land has been set aside as an easement or in fee, either by agreement or by condemnation.

Senate Bill 45 (SB45): Established priorities for the programming and expenditure of state transportation funds that are at the discretion of the Legislature and the Governor.

State Implementation Plan (SIP): A plan for attaining national ambient air quality standards required by the Clean Air Act.

Transportation System: The entirety of all facilities, equipment, vehicles, transfer points, and transportation services, public and private, across all modes, functioning together to serve a multitude of individual purposes in the transport of people, goods and services.

Weigh-in-Motion (WIM): Technology that determines a vehicle's weight without requiring it to stop on a scale.

Acronyms

ADT:	Average Daily Traffic
ACE:	Altamont Commuter Express
APCD:	Air Pollution Control District
ARB:	Air Resources Board
BNSF:	Burlington Northern Santa Fe Railroad
CTC:	California Transportation Commission
EPA:	U.S. Environmental Protection Agency
CHP:	California Highway Patrol
CMS:	Congestion Management System
ESA:	Environmentally Sensitive Areas
FHWA:	Federal Highway Administration
GIS:	Geographic Information Systems
HOV:	High Occupancy Vehicle
IRRS:	Interregional Road System
ITS:	Intelligent Transportation Systems
ITMS:	Intermodal Transportation Management System
ITIP:	Interregional Transportation Improvement Program
ITSP:	Interregional Transportation Strategic Plan
KPRA:	Kingpin-To-Rear-Axle
MOU:	Memorandum of Understanding
MPO:	Metropolitan Planning Organization
OWP:	Overall Work Program
P&R:	Park and Ride
RMDP:	Ramp Metering Development Plan
RTP:	Regional Transportation Plan
RTPA:	Regional Transportation Planning Agency
R/W:	Right-of-Way
STAA:	Surface Transportation Assistance Act
SHOPP:	State Highway Operation and Protection Program
STRAHNET:	Strategic Highway Corridor Network
TCR:	Transportation Concept Report
TDM:	Transportation Demand Management
TSDP:	Transportation System Development Program
TSM:	Transportation System Management
UP:	Union Pacific Railroad
YARTS:	Yosemite Area Regional Transportation System

Appendix C
Level of Service Definitions

The Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Six levels of LOS can generally be categorized as follows:

LOS A describes free-flowing conditions. The operation of vehicles is virtually unaffected the presence of other vehicles, and operations are constrained only the geometric features of the highway.

LOS B is also indicative of free-flow conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.

LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.

LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.

LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.

LOS F represents a breakdown or forced flow. It usually occurs at a point on a planned facility when forecast demand exceeds computed capacity.